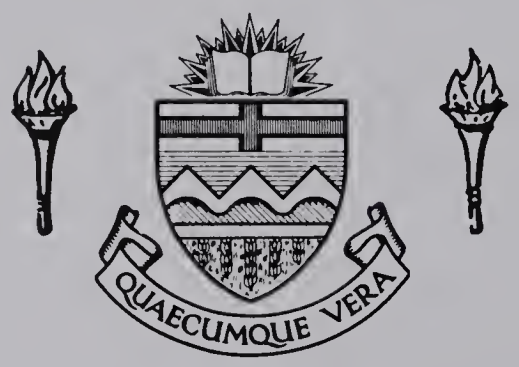

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COCURRICULAR PARTICIPATION AND STUDENT ACHIEVEMENT IN INDUSTRIAL-VOCATIONAL AND TRADES AND SERVICE PROGRAMS

by

MICHAEL ALPERN

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "Cocurricular Participation and Student Achievement in Industrial-Vocational and Trades and Service Programs" submitted by Michael Alpern in partial fulfilment of the requirements for the degree of Master of Education.

ABSTRACT

This study was designed to explore and assess the relationship of student participation in a high school cocurriculum to student achievement in industrial-vocational and trades and service vocational programs in an Edmonton public high school.

It was assumed that the effect of participation in the co-curriculum could be adequately assessed by questioning students and their parents. Four hypotheses were developed for this study, namely students who participate in the cocurriculum demonstrate higher achievement levels in vocational and trades and service vocational programs than do non-participants, students who participate in non-athletic cocurricular activities demonstrate higher achievement levels in vocational and trades and service vocational programs, the greater the level of parental support for the cocurriculum the higher the number of vocational and trades and service vocational students participating, and the greater the students' commitment to participation in the cocurriculum, the higher the level of their achievement in vocational and trades and service vocational programs.

A review of the literature indicated that much work had been done linking achievement and cocurricular participation at the post-secondary level. There was not, however, evidence of research linking cocurricular participation to achievement of non-academic and special program students at the high school level.

Two instruments were used in this study: The High School Educational Goal Questionnaire Part II, (McGrath (1971), obtained student responses; The Parents' Questionnaire on Cocurricular Activities, Sherritt

(1964), obtained parental responses. The population consisted of all grade eleven students enrolled in an industrial-vocational or Year 03 trades and service course that had a credit value of ten or more at Victoria Composite High School during the school year 1981-82. The sample was composed of fifty percent of the population selected at random from registrants.

The data from this study indicated support for the first and third hypotheses, and non-support for the second and fourth. Recommendations for possible action are that efforts be made to encourage all industrial-vocational and trades and service vocational students to participate in the cocurriculum, that a student survey to ascertain the interest and need for new activities be conducted; that equal promotion be given to athletic and non-athletic activities, and that parental support for the cocurriculum be increased through communication and by direct involvement in the cocurriculum.

The relationship between cocurricular participation and student achievement in other high school program areas and at the junior high school are suggested areas for further research.

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CHAPTER I

INTRODUCTION

Student participation in inter-school and intra-school athletics, clubs and social events has traditionally been defined as "cocurricular participation" or "extra-curricular participation".

Cocurricular activity programs, the cocurriculum, have been a subject of much concern and research during the past half century. Viewpoints towards the cocurriculum have extended between the views of Counts (1926) who saw the cocurriculum as activities that "forced their way into the school program", to Kline and McGraw (1974) who contend that the cocurriculum makes a most valuable contribution toward meeting youth's developmental needs and complementing the required and elective curriculum of the school. A move toward empirical research on the cocurriculum has been spurred by the increased emphasis of life-skills development as part of the students' program. Call (1974) infers that while a major concern of education is to educate the whole student, the major emphasis tends to be on the intellectual development through formal classroom instruction. While much discussion has concerned itself with cocurricular participation, Call recalls that very little hard data to either support or reject areas of emphasis is available (p.1).

Central to this study was the belief by Call (1974), Buser (1971), Macleod and Knill (1968) and others that a worthwhile study would be an investigation of the effect on individual educational performances as cocurricular participation increases.

Two major limitations in the available research are:

1. The lack of information concerning the relationship between co-curricular participation and program specific achievement at the high school level. Otto (1975, 1976), Spady (1970, 1971), Snyder, E. (1969), Snyder, F. and Blocker (1969) and Bourgon (1967) generally agree that participation in cocurricular programs has a statistically significant effect on educational attainment. There are, however, no specific indications of the programs or courses from which 'educational attainment' was measured. An inference that may be drawn is that studies have tended to equate attainment/achievement levels with grades in what Kline and McGraw (1974) identify as "the first curriculum" - those subjects established by boards as "required areas of study essential to all citizens" (p. 42). Taylor (1971), Call (1974) and others, have similarly centered their studies on the relationship of cocurricular participation - achievement/attainment to college entrants or high school students with college aspirations. This study was limited to explore the relationship of cocurricular participation to high school students' program specific achievement;
2. The narrow definition of "participation in the cocurriculum." Almost all studies noted have defined participation as formal membership in a sponsored athletic or non-athletic activity.

Statement of the Problem

The purpose of this study was to explore and assess the relationship of student participation in a high school cocurriculum to student achievement in vocational and trades and service, T & S programs, in an Edmonton public high school. Specifically it sought to answer the following questions:

1. What effect does participation in the cocurriculum have on student

achievement in vocational and T & S vocational programs?

2. What effect does participation in the athletic activities have on student achievement in vocational and T & S vocational programs, as compared to non-athletic participations?
3. What influence does parental support for the cocurriculum have on vocational and T & S vocational students' participation?
4. What effect does students' perception of cocurricular participations have on their achievement levels in vocational and T & S vocational programs?

Need for the Study

Much work has been done linking academic achievement and co-curricular participation especially at the post secondary level. There is not, however, much evidence of research linking cocurricular participation to achievement of non-academic and special program students, e.g. T & S and vocational.

Educators have traditionally worked on the assumption that if a student is not good academically, then he/she is best suited to a vocational special education program. Many vocational programs and all T & S type programs, therefore, tend to serve those who are assessed academically weak. This results most frequently in the lowering of these students' self-concept, their regard for the school, and a lessening of their participation in activities associated with the school and the cocurriculum. Otto (1975), in reference to schools who penalize students by denying participation privileges, stated,

> High school policies which deny participation in extra-curricular activities to those who have not achieved a minimal grade point average may be penalizing those very students who can least afford it (p. 173).

Vocational and T & S students have traditionally been regarded

as low achievers. Wilkins (1974) and Wendt (1968) found significant differences between vocational and academic students. Included in these differences are:

1. Lower SES for vocational students;
2. Poor attitude towards education by vocational students.

Teachers working in the area of the cocurriculum would agree with Spady (1971), who states that the cocurriculum can provide all participating students two major reinforcers:

1. Status and prestige;
2. Skills and attitudes that serve as resources in students' quest for future success.

Sherritt(1964) in a study of high school graduates, examined in his thesis the question "do extracurricular activities make a contribution to the accomplishment of the aims and objectives of education?" McGrath (1971) concluded in his study that participation was not related to educational and occupational goals when individual SES, grades and parental encouragement were controlled. These two most recent Canadian studies of the cocurriculum have done much to expand our knowledge of the effects of cocurricular participation on certain goal and career attainments. There are, however, no known studies that attempt to explore the relationship of cocurricular participation to program specific educational achievements. The need for such studies has, however, been noted by many writers.

The Supervisor, Cocurriculum, Edmonton Public Schools, indicated that, to the best of his knowledge, no study of the relationship had been carried out in the system. In view of the fact that the Edmonton Public School system's budget includes substantial monies for the operation of the cocurriculum, the need for this study was further justified.

McKown (1952) noted that the lack of evaluative data on cocurricular

participation has impeded growth of the cocurriculum and impeded our knowledge of the long and short term effects of cocurricular participation on students' achievement.

The knowledge gained through this study would, it was believed, allow recommendations to be made as to:

1. The effect of cocurricular participation to vocational and T & S students system wide;
2. The need to increase or decrease the present emphasis of the co-curriculum in the high school;
3. The directions that further research in this area may take.

Delimitations

This study was delimited in the following ways:

1. It was restricted to the vocational and T & S program at Victoria Composite High School, Edmonton, Alberta;
2. It included only those students who were enrolled in the program during the 1981-82 school year;
3. Results obtained may apply only to the programs specified at Victoria Composite High School unless similar results have been found previously in other high schools;
4. Results obtained may relate only to the instruments specified unless similar results have been obtained by using the same instruments in other schools.

Hypotheses to be Tested

The following hypotheses were developed for this study:

1. Students who participate in the cocurriculum demonstrate higher achievement levels in vocational and T & S vocational programs than do non-participants;

2. Students who participate in non-athletic cocurricular activities demonstrate higher achievement levels in vocational and T & S vocational programs;
3. The greater the level of parental support for the cocurriculum, the higher the number of vocational and T & S vocational students' participating;
4. The greater the students' commitment to participation in the cocurriculum, the higher the level of their achievement in vocational and T & S vocational programs.

Definition of Terms

Cocurricular Activities. Any activity that falls outside the prescribed high school formal academic-vocational curriculum and is recognized and sponsored in whole or in part by the School Government or School Council. This will include inter and intramural athletics, clubs, dances and other events of a social nature.

Cocurricular Participations. Scores will comprise recorded involvements in all School Government recognized and sponsored activities in and outside of the school. Included in these scores will be club memberships, attendance at school dances, spectating at intra-school and inter-school athletic and non-athletic activities.

Educational Achievement. Refers to students' industrial-vocational marks obtained from report cards issued by the Edmonton Public School Board in April, 1982.

Vocational Student. Any student registered in a ten, fifteen or twenty credit designated industrial-vocational program during the period of the study at Victoria Composite high school.

Trades & Service Student. Any student whose program is comprised of designated T & S courses and is registered in the Year 03 program at

Victoria Composite high school. All students designated T & S experienced major educational and/or social problems in Junior High School, and had difficulty in passing Grade 9.

Parent. A mother, father or guardian of students who comprise the population.

Population. The 151 students enrolled in a Grade 11 or T & S Year 03 industrial-vocational program for a minimum of ten credits during the 1981-82 school year at Victoria Composite high school.

Sample. A group of 76 students obtained through computerized random selection from the population.

Overview of the Thesis

This first chapter has presented a statement of the problem, a justification for the study, and stated four hypotheses that are to be tested. In addition, delimitations and term definitions have been detailed.

Chapter two will present a review of the literature concerning the field of cocurricular activities and related variables.

The third chapter details the methodology of the study and provides descriptions of the population, sample and instruments used to collect the data for the study.

The fourth chapter will provide the data collected from the student and parent questionnaires, and crosstabulations will be presented to indicate the relationship, if any, between variables in the study.

The final chapter will present conclusions and discussion to the support or non-support of the hypotheses stated in chapter one. The chapter will conclude with recommendations for possible actions, and suggested areas for additional research.

CHAPTER II

REVIEW OF THE LITERATURE

> The dearth of serious theorizing about the functions and consequences of the high school extracurriculum is paralleled only by the scarcity of relevant empirical research on its potential and actual consequences (Spady, 1971, p. 380).

The past sixty years have provided a feast of literature relevant to the subject of cocurricular activity programs. Within the broad spectrum of discussion on this subject, the literature provided the answers to four of the five basic research questions. It was possible to research the who, what, when and where of the cocurriculum. In very few sources, however, was one able to find adequate answers to the questions "why have a co-curricular program?" or, in a similar vein, "of what value are student activities?"

Graham (1964) asked the latter question. Unfortunately, neither Professor Graham, her predecessors or contemporaries have managed to present what Spady (1971, 1970) has called 'adequate relevant empirical research'. Graham, herself, stated that the lack of objective evidence that the far reaching purposes of the cocurriculum are being achieved necessitates a cautious statement about how students are influenced by participation (p.16). Buser (1971) felt there is cause for concern for both the state of the activity programs and their potential role in the schools of the seventies (p. 50).

The concerns about the value of the cocurriculum to students is not just a feature of the research in the past two decades. Literature dating back to the 1920's expressed similar concerns. Early attempts to answer the question 'why have a cocurriculum?' have been resolved by

presenting broad goal statements of student achievement and enrichment in the areas of responsibility, citizenship, leadership, enhanced self-image, etcetera. Counts (1926) suggested that the only logical way to measure the desirable outcomes of the cocurriculum was to ask those students graduating from high school. He continued,

> Only by the measurements of its contribution to the accepted objectives of education, through the development of habits, knowledges, attitudes, dispositions, and powers can the value of any school procedure be determined (p. 419).

Some four decades later Macleod and Knill (1968) noted that there was a need for research on students' councils that was based on theories which were not merely statements of what some individual believes ought to be, but rather were descriptive theories which could give rise to empirical predictions that can be confirmed by experience (p. 208).

The literature abounded with statements as to the need for objective research and evaluation of the cocurriculum. In view of this, it was most interesting to note how little had actually been carried out. Counts (1926) with excellent predictive power might have reflected the attitude of many of today's high school teachers in this conclusion to his paper on activity programs:

> These activities have forced their way into the school program, and, even though we might seek to oppose them, they will probably remain there for years to come. We must strive to derive from them the largest crop of educational values which they can be made to yield. This result can be achieved only as the work of evaluation is prosecuted with success (p. 421).

It is the purpose of this chapter to present a review of selected literature relevant to the evaluation of high school cocurricular activity programs and their relationship to student achievement in program specific areas of the high schools' formal curriculum. In addition, literature is presented that provides some historical background to the cocurriculum,

and an evaluation of the literature and its sufficiency or non-sufficiency is made. Further literature is presented to illustrate some of the many variables that need to be considered when a study of cocurricular participation and achievement levels in the formal curriculum areas is made.

Cocurricular Activity Programs

The term, the cocurriculum, as used throughout this study, was used to describe all of those activities that fell outside of the high school's formal academic-vocational curriculum. These activities might be formal or informal, social or recreational, athletic or non-athletic. Provided that the activity was identified within the following purpose-statement, it was accepted as part of the cocurriculum. The Edmonton Public School Board's School Administrators Handbook, 1981, stated,

> The broad purposes of student extra-curricular organizations and clubs are:
>
> 1. To contribute to the betterment of overall school and community climate;
>
> 2. To enhance and supplement the instruction offered in all subject areas;
>
> 3. To aid in the achievement of the broad goals of education as stated by the Department of Education (p. 198).

The literature presented a vast array of statements of purpose and philosophies for the cocurriculum. Possibly, the most often quoted and most often copied was the "Seven Sign Posts" of the cocurriculum as outlined by Fretwell (1931). McKown (1952), and Miller, Moyer and Patrick (1956) modified these guidelines, and Hearn (1966) presented the most generally accepted statement of objectives for a cocurricular activities program. These were again a modification of Fretwell's objectives. Hearn's statement of objectives were:

1. Developing responsibility and becoming increasingly self-directive;
2. Working harmoniously with others;
3. Using leisure time constructively;
4. Developing leadership and fellowship traits;
5. Attaining competance in parliamentary procedures;
6. Developing acceptable audience habits;
7. Dedicating oneself to the service of others;
8. Furthering present avocational interests and developing others;
9. Maintaining and furthering good physical and mental health;
10. Understanding and practising commonly accepted usages and customs;
11. Developing worthy personality traits (p. 5 - 6).

Of major significance was Hearn's emphasis that classroom and non-classroom activities, curricular and cocurricular, should both complement and supplement one another.

Goodman (1975) listed as descriptions of cocurricular activities a multiple group of generally accepted synonyms. However, the contemporary and historical literature on the cocurriculum has abounded with discussion as to the relative merits of various nomenclatures for the program. Miller, Moyer and Patrick (1956), Kilzer, Stephenson and Norberg (1956) advocated the use of the descriptor "allied activities."

The latter authors, in opposition to Counts (1926) and others' usage of the term 'extracurricular', said,

> The term 'extracurricular activities' is both inaccurate and undesirable, but it is often used for no better reason that than people generally understand its meaning. It has unfortunate implications because EXTRA implies that the activities are extraneous to the real purpose of the school (p. 1).

Anderson and Van Dyke (1963) similarly disfavour the 'extra-curricular' term because it implied that students' attention was being distracted from their prescribed academic pursuits (p. 221).

An interesting descriptor for the cocurriculum was presented by Frederick (1959) in his book The Third Curriculum. He said that if this program was properly managed, it would contribute to the total educative experience by reinforcing classroom learning; supplementing formal studies in the required and elective curriculum; aiding total life adjustment; intergrating learning; and democratizing schools (p. 55). In a later work Frederick (1965) traced the cocurriculum back to the sixteenth century schools. He reiterated earlier published statements as to the program's goals, and in addition said that the activity program provided another most beneficial educational experience - the learning of freedom. He added, "freedom must be learned by practice in real situations" (p. 8).

It was significant to note that the 1976-77 Alberta-Education publication, Junior and Senior High School Handbook, made no specific use of any descriptor or synonym for the cocurriculum in the statement of 'Goals of Basic Education'. In fact, the only reference to the co-curriculum was in a statement of limitations regarding the provision of credits under 'special projects credits'. The precise statement was,

> Special Project Credits should not be equated with student activities that should be a normal part of extracurricular and/or cocurricular activities of a school.....

Nowhere, however, were the terms 'normal', 'extra-curricular' and/or 'cocurricular' defined. The 1982-83 Handbook has provided examples of cocurricular activities. These included: school team sports, school newspaper, and yearbook.

It was evident from researching the literature that the boundaries of what constituted the cocurriculum were at best blurred. The empirical research that had taken place had attempted to specify the specific areas of student participation in the cocurriculum. Selections from this literature are presented in the next section.

Research on Cocurricular Activity Programs and Curricular Achievement

Cory (1953) suggested, as did Counts (1926), that the only effective method of evaluating the effectiveness of the cocurriculum was to ask the high school graduates (p. 681). Once again, however, the research provided an opinion of personal preferences with little or no control of intervening variables.

A number of empirical studies have been carried out relative to the cocurriculum. Snyder, E. (1969) found a significant relationship between social participation in high school and later occupational and educational achievement (p. 270). No record of any program specific achievement levels were made. Snyder, F. and Blocker, C. (1969) in a study of community college students presented findings and conclusions that included:

- males participated more than females;
- student participation was positively related to grade achievement level;
- sophomores were more involved than freshmen;
- cocurricular activity programs were the means to significant personality development (p. 13).

Sherritt (1964), in a study on the evaluation of the contribution of extracurricular activities to the accomplishment of educational objectives, took as its basic assumption, that the effect of participation in the cocurriculum could be adequately evaluated by questioning parents and graduates.

Analysis of information gathered through questionnaires found:

1. Participation in cocurricular activities made some contribution to the fulfilment of the aims and objectives of education (as outlined by Alberta-Education);
2. Some activities, e.g. non-athletic, made a greater contribution than

others to the aims and objectives of education;

2. Parents felt that time spent by their child in participations was contributing to adolescent development.

Sherritt's study considered the influence of a number of variables. The influence of school socio-economic status, SES, and individual student SES were examined as factors that might influence cocurricular participation. A more detailed examination of SES research relative to participations is presented in the next section.

In the absence of any statement to the contrary, it must be assumed that the Sherritt study made no attempt to research for any relationship between cocurricular participation and achievement in specific subjects or programs.

A report by Bourgon (1967) presented findings from a study of 750 high school students. The two most relevant findings were:

1. Students who are successful academically participate in greater numbers and in more activities than those who are less successful;
2. Girls were twice as active participants in the cocurriculum than boys.

The emphasis of much of the literature appeared to be on the strictly academically oriented student; the student who aspired to enter college or university, or the student who had already entered college or university. Jackson's (1965) study is in this latter category. He found that low-activity and no-activity students tended to make the lowest grades; grades rose with increases in participation time; the relationship of participation time to grades was not dependent upon the level of ability of the students; different types of participation were found to be not related to grades achieved.

In contrast to Jackson's findings, Call (1974), in a study of college students, found no significant relationship between academic

achievement and cocurricular involvement. He qualified this finding by stating,

> Although no correlation was found between the variables relative to groups, does not mean that there may not exist a correlation in regard to the individual. One observation crystallized is that students tend to seek their own level of involvement... If a student experiences academic difficulty relative to this expectation, he simply backs-off from burdensome involvement (p. 14).

In concluding his study, Call stated that a worthwhile study would be to investigate the effect on individual academic performance as extra-curricular activity increases. He further noted that while much discussion has concerned itself with the benefits of participation "very little hard data to either support or reject was available" (p. 1).

An extensive study of teenagers was conducted by Friesen (1969). A sample of approximately 15,000 students was surveyed as to their needs, their thoughts, their achievements, their aspirations and the number and type of participations both in school and in the community. Frieson found that less than fifty percent of the students participated in cocurricular activities. The need for popularity was strongly expressed by forty-five percent of the students, and in this connection Friesen expounded the "academic-athletic-popularity syndrome". In this connection he quoted from Downey (1965),

> If one is to comprehend the ways of adolescents one must look for partial explanations of their behaviour in the value system which is their own ... what do adolescents value? Adolescent boys appear to value athletics and adolescent girls value success much more than they value academic achievement (p. 69).

A 1966 study by Holland and Richards of a three percent sample of 612,000 high school students reported that academic and non-academic achievement (cocurricular) were relatively independent kinds of talent. People who had one kind of talent may or may not have others (p. 14). This study specified areas of cocurricular achievement and participation.

The authors concluded that since academic potential appeared to be only one of several relatively independent dimensions of talent we should continue to develop other independent measures of achievement and originality (p. 16).

Spady (1971) provided a most succinct conclusion to his chapter on the researchings on cocurricular participation and curricular achievement levels,

> Students are exposed to a range of potentially functional socialization experiences in pursuing extracurricular activities. These activities not only provide participants with varying degrees of status and prestige, they also facilitate the development of skills and attitudes that serve as resources in students' quest for future success (p. 396).

Socio-Economic Status and Other Related Variables

There appeared to be little doubt among most reserachers that the SES of the individual student had a significant relationship to both participation in the cocurriculum and curricular achievement levels. Friesen (1969), on the basis of a most comprehensive study of youth, found,

> The higher the socio-economic classification of students the higher was their aspiration level, their achievement, and their participation in extracurricular activities and in community services (p. 30).

An investigation by McDonald (1962) concluded that over-achievers in all areas of the schools' curriculum came from high SES families, while under-achievers were found in no peculiar SES category. These findings were corroborated by Smith (1964). In a study of 477 high school students from rural and urban high schools Smith found that students who took greater advantage of cocurricular participation already had some advantages. These would included high SES, superior intelligence and better personality adjustment. Once again, however, Smith echoed the concerns of many colleagues as to the lack of valid and reliable instruments to measure participations. Snyder, F. and Blocker (1969), used father's education and

occupation as a measure of family SES and found participation was directly related to father's education.

Herriot and St. John (1966), Stanton (1967), and McCray (1967) provided further support for the relationship of SES to participation and achievement levels. The McCray study, based on 1700 seniors in Gary, Indiana high schools found:

1. The higher the level of parents' education the greater the motivation for students' participation;
2. Future aspirations were strongly related to participation levels. Students planning to enter college participated more highly than students who had neither college nor occupational plans.

Additional support was provided by Mcleod and Knill (1968). They observed a close relationship between social class and membership on the high school student council. Those in elected positions were from a higher social class and more active in the cocurriculum.

Two final studies appeared at first to be exceptions to the previously stated positions on the relationship of SES to participation and achievement levels. McGrath (1971) found little relationship between SES and participation, and no relationship between school SES and participation.

Rehberg and Schafer (1973) found,

> Participation in the activities of the high school varies systematically with specific social characteristics of the student himself (p. 1).

However, their findings indicated that the relationship of SES to participation is almost non-existent. They noted that student participations, at least during the senior high school year, do exert an independent incremental effect on both the level of educational expectations and upon the level of subsequent educational behaviour (p. 16).

On the basis of these two studies it was significant to note De Blayser's (1976) findings that student participation in the cocurriculum has decreased substantially since 1968. This may reflect changing attitudes by students to the program, in changing school attitudes, or students' disinterest in schools. McGrath (1971) contended that most studies to that date had ignored the relationship between social class of the student and his participation in the cocurriculum. He concluded,

> The findings have suggested that those students who seem to profit from social participation in the high school are those who are known to support high educational and occupational aspirations - high SES family, high grades.... (p. 13).

From observations and discussions, it was the belief of many teachers and directors of activity programs that the very students who could derive most benefit from participation in the cocurriculum were those who were without the other positive motivational factors, high SES, high achievers, good peer relationship, etcetera. To elaborate briefly, the non-academic student was most frequently found in a vocational or trades and services program. Too frequently, peer influences and self concept of the vocational student did not permit active participation in the cocurriculum. A circular effect was often produced that might reinforce the negative peer influences and low self-concept. Belles (1965) expressed a similar understanding,

> It is fundamental that we want to repeat those things that give pleasure and satisfaction ... the boy who plays truant because school is dissatisfying, by way of correction, is given more school (p. 13).

Belles suggested that schools set up informal activities that related to pleasurable formal activities in the school. Expanding this suggestion we might find that an informal carpentry or solar energy club attracted vocational AND possibly academic students, thereby creating a new range of potentially positive social influences.

An Assessment

There was a vast body of literature available that is related to the cocurriculum in the high school. The interest in this area by researchers has tended to peak at intervals during the past sixty years. The National Association of Secondary School Principals published a bibliography on the subject of student activity programs in 1974. However, most of this literature was of a descriptive and/or prescriptive nature. Its major emphasis was on the content and goals of activity programs.

A limited amount of research has been carried out to evaluate the relationship of participation by the individual student and its effect on his achievement levels in other areas of the high schools' curriculum. To the extent of this writer's survey of the literature there were few studies available relevant to non-academic and special program students, e.g. trades and services, and vocational. A brief report by Wine (1973) on student activities and the educable mentally retarded (EMR) stated,

> EMR students are in need of extracurricular activities to meet the objectives of their education... Most EMR students do not participate in activities nor are they encouraged to do so. This is probably due to the fact that many special educators, as well as other educators, are unaware of the social, intellectual and physical growth that can occur in students due to their participation in some activity program (p. 472).

In a similar study McDaniel (1970) was quoted,

> The activity program should be relevant to the student's education and contribute to his understanding of life. It is something which he cannot receive any place else in the school curriculum (p. 472).

The implications of McDaniel's statements have significance for educators.

High schools in North America are experiencing drop-out rates of 15% to 25%. According to the 1971 Census there were half a million persons aged 15 to 24 who were neither in school nor in the labour force

(Canadian Welfare, 1977, p. 23). This article continued,

> Young people are depressed and confused ... it is necessary to make progress in refining the basics (of education) to include life skills ... interpersonal skills ... communication skills.

It was the considered opinion of much of the literature that the cocurriculum could complement the formal curriculum and, indeed, supplement it as well by providing a training ground for skills not usually taught in a classroom. However, a statement of what might be was no substitute for empirical data.

The relationship of social class factors was perceived by most pre-1970 researchers to be significant to activity participation and academic achievement levels. No data was available, however, on the precise definition of 'academic'. The limited amount of recent research finds a reversal in the social class - participation-achievement relationship. Rehberg (1975), using a number of school process variables including participation in the cocurriculum, found that,

> Results indicate that contrary to current revisionist thought there is little evidence to support a contention that social class has a strong effect on the progress of the individual high school student. Other variables including scholastic ability, interpersonal influences from parents and peers, and the personal educational objective of the student himself, had a larger influence upon school progress.

Discussions with a director of research and evaluation at the Edmonton Public School Board indicated that no formal evaluation of the high school's cocurricular program had been conducted to the best of his knowledge. More specifically, no study of the relationship: cocurricular participation - curricular achievement, had been carried out within the system to the best of his knowledge. In view of the fact that the Board's budget included substantial monies for the operation of the cocurriculum, it appeared that such a study would be of some value. This was further

substantiated from a discussion with the supervisor of the cocurriculum, E.P.S.B., who indicated that a study of the program's influence would be most enlightening, for, as had been indicated by Spady (1970), at the post-secondary level,

> The extracurriculum serves ... by providing opportunities for success that lie outside the formal academic structure and by helping students to develop attitudes and skills that will bolster those (formal academic) aspirations (p. 700).

CHAPTER III

METHODOLOGY

It is noted by Sherritt (1964) that of all the multitude of books on the subject of cocurricular activities, few showed concern for any objectives and principles of evaluation (p. 28). McKown (1952) presented two objectives which appeared most significant to this study:

1. To determine the immediate effects of participation;
2. To determine the ultimate effects of participation (p. 632).

Background to the School

Victoria Composite High School, Vic, at sixty-five years of age, is one of the oldest schools in Edmonton. From a "red-brick" school in the 1920's, the facilities were extended to offer a full range of academic, business, general and industrial-vocational programs. While improvements to facilities and programs are ongoing, the last major facility and additions were made around 1963. From a maximum population of some 2,700 students in 1968, this inner-city school now has a total population of approximately 1,350 students. This number is approximately comprised of one-third T & S, one-third English as Second Language students, ESL, and the remaining third "regular" high school students.

As an inner-city school, Vic faces a number of unique problems. Among these are high transiency rates, multi-ethnic/language groups, very limited parental contact with the school, and a relatively poor image, Korenblum (1980). In a major effort to project a positive image to parents and prospective students, and, in a similar effort, to promote a sense of identity and school spirit within the school, a new administrative initiative was taken with the appointment of a new principal in 1979. The new

initiative has done much to promote school image and school spirit. As an ex-professional sportsman, the principal has tended to accentuate the athletic aspects of the cocurriculum. The non-athletic activities have been continued on the basis of student request.

Population and Sample

The population for this study consisted of all students enrolled in a grade eleven or T & S Year 03 vocational program that had a credit value of ten or more at Victoria Composite High School, Edmonton, during the school year, 1981-82. (N = 151)

The population was composed of 98 grade eleven and 53 T & S Year 03 students. The range of industrial-vocational courses covered by the study population is indicated below:

Population by Subject Enrolment - Grade 11 and Yr. 03 T & S

AUTOMOTIVES	42.0
BEAUTY CULTURE	26.0
BUILDING CONSTRUCTION	8.0
DRAFTING	14.0
COMMERCIAL ART	4.0
ELECTRICITY	6.0
FOOD PREPARATION	10.0
GRAPHIC ARTS	5.0
INSTITUTIONAL SERVICES	1.0
MACHINE SHOP	5.0
PERFORMING ARTS	4.0
PIPE TRADES	4.0
TELEVISION	8.0
WELDING	14.0

N = 151

The sample was composed of fifty percent of the population selected at random from the computer-produced registrations provided for the school. The decision to sample grade eleven and T & S Year 03 students was made in accordance with McGrath (1971), who noted it had been established that grade ten students usually had not yet established patterns of cocurricular participation, and grade twelve students, because of their impending final examinations and part-time work patterns in their final year of high school, might modify the cocurricular participation patterns.

Instrumentation

Two instruments were utilized in this study: (Appendix I and II)

1. Student Questionnaire: High School Educational Goal Questionnaire Part II. This instrument was part of a larger questionnaire developed and tested by McGrath (1971), Extracurricular Participation in Three Urban High Schools. The student questionnaire used in the present study was modified only to include or exclude cocurricular activities that were relevant to Victoria Composite High School. The purpose of this instrument was to indicate the number and type of participations by students; the amount of time they spent per week on participations; their authority, if any, in the activity; awards received for activity participations' an assessment of their level of participation in each activity as compared to others;
2. Parents Questionnaire on Cocurricular Activities. This instrument is one of two developed and tested by Sherritt (1964), An Evaluation of the Contribution of Extra-Curricular Activities to the Accomplishment of Educational Objectives.

   The parents questionnaire used in this study was modified only to include questions, descriptions and activities that were relevant to

Victoria Composite High School. The questionnaire measured parental opinion as to:

1. Value of cocurricular activities to adolescent development;
2. Effect of the cocurriculum on student attitude to school;
3. Effect of the cocurriculum on schoolwork;
4. Amount of time that should be spent on participations;
5. Comparative value of different types of cocurricular participation;
6. Desirability of carrying on the activities in school time or students' own time;
7. Desirability of limiting participation in the cocurriculum;
8. Additional activities recommended;
9. Most valuable contributions made by participation.

Collection of Data

Student Questionnaire

The students' questionnaire was administered to the sample present in Victoria Composite High School grade eleven vocational and Year 03 T & S classes during the second instructional block of the day. This block traditionally had the highest attendance. Students from the sample who were not present on the day the questionnaire was administered were followed up within one week of the first administration of the instrument. During the course of study, eight students from the sample left school, and five resisted repeated attempts to have them complete the questionnaire.

Parent Questionnaire

The parents' questionnaire was mailed to the parents or guardians of all students in the sample. A stamped, self-addressed envelope was provided for return of completed questionnaires. Follow-up contacts were made where possible to ensure the maximum possible returns.

On each parent questionnaire the parents were asked to identify their parental status and the sex of their child in grade eleven or Year 03. This was done to allow possible variations of opinion regarding the co-curriculum according to sex to be identified.

Industrial-Vocational Marks

Industrial-vocational and T & S vocational program marks for the sample were obtained from report cards issued by the Edmonton Public School Board in April, 1982.

Parents, their respective students' questionnaires, and student achievement marks were coded to allow for specific parent-child analysis.

CHAPTER IV

DATA ANALYSIS

From the questionnaires completed by students, their respective parent(s) or guardian, and from the industrial-vocational marks obtained, a detailed analysis was carried out from which the four stated hypotheses were tested.

To govern the procedure of evaluation of the information collected, Miller, Moyer, and Patrick (1956), offered eight principles:

1. Evaluation of the cocurriculum is but a part of the total school program for judging the effectiveness of instruction;
2. All aspects of the cocurriculum must be evaluated;
3. Everyone directly affected by the cocurricular program should be invited to assist in the evaluation of it;
4. A variety of evaluative procedures should be employed;
5. Objectivity is essential;
6. All data must be organized and critically analyzed so that recommendations may be drawn from it;
7. Records pertaining to evaluation should be kept and used;
8. Evaluation is a continuous process (p. 595).

Sherritt (1964) noted that these principles were obviously meant to apply to the evaluation of a particular program of cocurricular activities in a single school. It was in this context that all principles, (with the exception of the third), were used in the analysis reported here.

Industrial-Vocational Marks

Student marks for the sample were obtained from report cards issued by the Edmonton Public School Board, April, 1982. Sixty-three students (83%) from the sample of 76 responded to the student questionnaire. Due to the high transiency rate for students at the school, eight students

(10.5% of the sample) left school during the period of research. In addition, five students (6.5% of the sample) resisted repeated efforts to complete the student questionnaire. Table 1 shows the mark distribution for the sample.

Table 1

Industrial-Vocational Mark

Mark (%)	Number of Respondents	Percentage
-50	6	9.5
50-64	26	41.2
65-79	22	35.0
80+	9	14.3

n = 63

Student Responses

Crosstabulations of students' industrial-vocational marks by the number of their cocurricular participations were made to determine the relationship, if any, between these two variables. These data appear in Table 2.

Table 2

Students' Industrial-Vocational Mark
Related to Student Participations (Athletic & Non-Athletic)

Mark (%)	Student Participations									
	0		1 - 4		5 - 8		9 - 12		Total	
	n*	%	n*	%	n*	%	n*	%	n*	%
-50	4	3.2	4	3.2	1	0.8	3	2.4	12	9.6
50-64	22	17.5	15	19.8	5	3.0	0	0.0	52	41.3
65-79	11	8.7	29	23.0	3	2.4	1	0.8	44	34.9
80+	8	6.2	6	4.8	2	1.6	2	1.6	18	14.2
Total	45	35.6	64	50.8	11	8.8	6	4.8	126	100.0

n = 126

* = Responses from non-athletic participations plus responses from athletic participations (2n)

TABLE 3

Industrial-Vocational Marks Related to
Participations by Students in Non-athletic and Athletic Activities

Mark (%)	Student Participations																					
	Non-Athletic												Athletic									
	0		1		2		3		4+		Total		0		1-4		5-8		9-12		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
-50	3	4.8	1	1.6	0	0.0	1	1.6	1	1.6	6	9.6	1	1.6	2	3.2	0	0.0	3	4.8	6	9.6
50-64	15	23.8	6	9.5	4	6.3	1	1.6	0	0.0	26	41.2	7	11.1	14	22.2	5	8.0	0	0.0	26	41.2
65-79	7	11.1	9	14.3	5	7.9	0	0.0	1	1.6	22	34.9	4	6.3	14	22.2	3	4.8	1	1.6	22	34.9
80+	6	9.5	1	1.6	0	0.0	2	3.2	0	0.0	9	14.3	2	3.2	3	4.8	2	3.1	2	3.2	9	14.3
Total	31	49.2	17	27.0	9	14.2	4	6.4	2	3.2	63	100.0	14	22.2	33	52.4	10	15.9	6	9.6	63	100.0

n = 63

These data indicated that 64.4% of students participate in one or more activities. The majority of students participated in from one to four activities, and more than half of those who participated achieved marks of 65% or better.

Table 3 reports that crosstabulations of students' industrial-vocational marks by their non-athletic and athletic participations respectively. Of the 26 students whose mark was in the 50 - 64 category, 11 (17.4%) had one or more non-athletic participations and 19 (30.2%) had from one to eight athletic participations. Of the 22 students whose mark was in the 65 - 79 category, 15 (22%) had one or more non-athletic participations, and 18 had from one to twelve athletic participations, (28.6%). The highest marks, 80 and above, were achieved by 9 students. Of these nine students, three indicated one or more non-athletic participations and seven indicated from one to twelve athletic participations.

Of the 31 students who achieved a mark of 65% or better, 18 showed participations in non-athletic activities and 25 showed athletic participations.

Students reported spending variable amounts of time on the cocurriculum. Sixty percent of the sample indicated spending more than six hours per week on cocurricular activities. The remaining forty percent spent from zero to five hours per week on cocurricular activities.

Table 4 shows that of the 26 students whose mark was in the 50-66 category, 8 (12.7%) participated from six to ten hours per week, and 7 (11.1%) noted spending more than ten hours per week participating. Of the 22 students who achieved marks in the 65-79 category, 3 (4.8%) indicated from six to ten hours of participation per week, and 9 (14.3%) noted in excess of ten hours of weekly participation. Of the 9 who achieved marks of 80 or better, 2 (3.2%) indicated six to ten hours per week participation,

and 5 (7.9%) noted in excess of ten hours per week spent on cocurricular participations. Of the 31 students who achieved a mark of 65% or better, 14 (22.2%) participated eleven hours or more per week, 5 (8%) participated for six to ten hours per week.

Table 4

Industrial-Vocational Mark Related to Students' Weekly Hours of Cocurricular Participation

Mark (%)	Weekly Hours of Participation							
	-5		6-10		11+		Total	
	n	%	n	%	n	%	n	%
-50	2	3.2	1	1.6	3	4.8	6	9.5
50-64	11	17.5	8	12.7	7	11.1	26	41.3
65-79	10	15.9	3	4.8	9	14.3	22	34.9
80+	2	3.2	2	3.2	5	7.9	9	14.3
Total	25	39.7	14	22.2	24	38.1	63	100.0

n = 63

Few respondents reported that they had held an office or had received an award in the cocurricular program. Table 5 indicates that an office was held by 2 (3.2%) respondents, and awards received by 8 (12.7%) respondents.

Table 5

Offices Held and Awards Received by Students in Cocurricular Activities

Category	Office		Award	
	n	%	n	%
Yes	2	3.6	8	12.7
No	61	96.8	55	87.3
Total	63	100.0	63	100.0

n - 63

Students reported (high, medium, or low) their perception of their participation level compared to others in the non-athletic and athletic activities. These data are presented in Table 6. Eleven (17.5%) perceived their non-athletic participation as being "high", 13 (20.6%) "medium", and 39 (61.9%) "low". Perceptions in regard to athletic perceptions compared to others were indicated as being "high" 18 (28.6%), "medium" 23 (35.5%), and "low" 22 (34.9%).

In addition, Table 6 presents the results of crosstabulating students' perceptions as noted in the preceding paragraph by their industrial vocational mark. In all mark categories students perceived their level of participation as compared to others to be almost twice as high when applied to athletic rather than non-athletic participations. Of the 26 students whose mark was in the 50-64 category, those who perceived their comparative participation level "medium" or "high" were 9 (14.3%) in non-athletic activities and 16 (25.4%) in athletic activities. Of the 22 students whose mark was in the 65-79 range and whose perceptions of their participation level was "medium" or "high", 9 (14.2%) were in non-atheltic activities, and 14 (22.2%) were in athletic activities. Of the students who achieved marks of 80 or above, 3 (5.2%) had "medium" or "high" perceptions of their participation level in non-athletic activities, and 6 (9.5%) perceived themselves of having "medium" or "high" participatory levels in athletics.

Crosstabulations were carried out to determine the relationship, if any, between parental support for the cocurriculum and the number of student participations. These are reported in Tables 7 and 8.

The final crosstabulations were to determine the relationship, if any, between student participations and parental views of the value of the cocurriculum to students' attitude to their schoolwork, the effect on students' schoolwork, the development of leadership qualities. These crosstabulations are presented in Table 7. These crosstabulations indicated that

TABLE 6

Students Industrial-Vocational Mark Related to Students' Perception of their Participation Levels in the Cocurriculum Compared to Others

Mark (%)	Students' Perception of Participation Level Compared to Others															
	(a) Non-Athletic								(b) Athletic							
	Low		Medium		High		Total		Low		Medium		High		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
-50	3	4.8	1	1.6	2	3.2	6	9.5	1	1.6	2	3.2	3	4.8	6	9.5
50-64	17	27.0	6	9.5	3	4.8	26	41.3	10	15.9	10	15.9	6	9.5	26	41.3
65-79	13	20.6	5	7.9	4	6.3	22	34.9	8	12.7	9	14.3	5	7.9	22	34.9
80+	6	9.5	1	1.6	2	3.6	9	14.3	3	4.8	2	3.2	4	6.3	9	14.3
Total	39	61.9	13	20.6	11	17.5	63	100.0	22	34.9	23	36.5	18	28.6	63	100.0

n = 63

TABLE 7

Parental View of the Value of the Cocurriculum to Students' Attitude to School Work, Effect on School Work, Leadership Development and Citizenship Development Related to Student Participations

Cocurricular Participation	Parental View of the Value of the Cocurriculum (%)											
	Attitude to School Work			Effect on School Work			Leadership Development			Citizenship Development		
	None	Some	Very Much	None	Bad	Good	None	Some	Very Much	None	Some	Very Much
0	12.4	19.8	5.8	15.4	3.7	18.3	2.9	15.4	19.2	1.9	23.6	12.3
1-4	5.6	26.5	17.8	17.3	5.8	27.0	1.0	23.0	25.9	1.9	22.6	25.4
5-8	0.9	3.7	1.9	3.0	1.0	2.8	0.0	2.9	3.9	0.0	4.7	1.8
9-12	0.0	4.7	0.9	2.8	1.0	1.9	0.0	3.9	2.9	0.0	3.7	1.8
Total(%)	18.9	54.7	26.4	38.5	11.5	50.0	3.9	44.2	51.9	3.8	54.7	41.5

n = 53

where parental support for the cocurriculum is evidenced, approximately 60% participation level is indicated.

Additional analysis crosstabulated the number of student participations by the parents' view of the value of cocurricular participation to the furtherance of education. These data, presented in Table 8, show that where parents viewed cocurricular participation as having "some" or "very much" value to the furtherance of education, 57.6% of students participate in from one to twelve activities. Where parents do not view there to be any value to cocurricular participations, 9.6% of students do not participate, and 3.9% participate in from one to eight activities.

Table 8

Parental View of the Value of the Cocurriculum to the Furtherance of Education Related to Cocurricular Participations

Participations	Value to the Furtherance of Education (%)			
	None	Some	Very Much	Total
0	9.6	23.1	5.8	38.5
1-4	2.9	36.5	9.6	49.0
5-8	1.0	4.8	1.0	6.8
9-12	0.0	4.7	1.0	5.7
Total (%)	13.5	69.1	17.4	100.0

n - 53

Parental Responses

The number of questionnaires mailed to parents was 76. This accounted for all parents of students in the sample. Responses totalled 53, representing a 70% return. Nineteen fathers, thirty-two mothers, and two guardians returned questionnaires. Boys were reported on by thirty-five parents, girls by eighteen parents. There were thirty-five responses from parents of grade 11 students, eighteen from parents of T & S students.

Fifteen questions were to be answered. The responses given by parents are summarized below.

Question 1. Would you describe the amount of time your child spends on cocurricular activities as: (a) Spends all spare time; (b) Spends almost all his spare time: (c) Spends some time; (d) Spends no time (does not participate).

Table 9 indicates that 77.4% of parents describe their child as participating in the cocurriculum to some extent.

TABLE 9

Amount of Time Spent on Cocurricular Activities

Time Spent	%
All spare time	1.9
Almost all spare time	69.8
Some spare time	5.7
Does not participate	22.6

n = 53

Question 2. Do you feel that taking part in cocurricular activities is helping to further your child's education? (a) Very much; (b) Some; (c) None.

Table 10 shows that the majority of parents believed that participations are valuable to the furtherance of their child's education.

TABLE 10

Value of Cocurricular Participation to the Furtherance of a Child's Education

Value of Participation to Education	%
None	13.5
Some	69.2
Very much	17.3

n - 53

Question 3. Do you feel that taking part in school activities will help your child to become a better citizen? That is, is it helping him develop a sense of responsibility and the ability to work with others? (a) Very much; (b) Some; (c) None.

Table 11 indicates that almost all parents perceive participations as having a role to play in the development of citizenship qualities, responsibility and sociability.

TABLE 11

Value of Cocurricular Participations to the Development of Citizenship Qualities

Value of Participation to Citizenship Development	%
None	3.8
Some	54.7
Very much	41.5

n = 53

Question 4. Do you feel that taking part in school activities helps to develop qualities of leadership? (a) Very much; (b) Some; (c) None.

Table 12 shows that 96% of parents perceived cocurricular participation as being beneficial to the development of leadership qualities for their child.

TABLE 12

Value of Cocurricular Participation to the Development of Leadership Qualities

Value of Qualities of Leadership Development	%
None	3.8
Some	44.2
Very much	41.9

n = 53

Question 5. Do you feel that cocurricular activities tend to have a good effect or a bad effect on schoolwork, homework, and school marks? (a) Good effect; (b) No effect; (c) Bad effect.

Table 13 indicates that half of the respondents feel that co-curricular participations have a good effect on school and homework and student marks. Almost 40% feel that participations have no influence on these factors.

TABLE 13

Effect on Schoolwork, Homework and Marks of Cocurricular Participation

Effect of Schoolwork, Homework & Marks	%
Good	50.0
Bad	11.5
No effect	38.5

n = 53

Question 6. Do you feel that taking part in school activities is helping to create a better attitude toward schoolwork on the part of your child? (a) Very much; (b) Some; (c) None.

Table 14 shows that the majority of parents, 81.1%, felt that a better attitude towards schoolwork is created by participation. 26.4% felt that their child's attitude is very much improved through their participat-ions in the cocurriculum.

TABLE 14

Contribution Made by Cocurriuclar Participations to Students' Attitude to Schoolwork

Contribution to Student Attitude to Schoolwork	%
Very much	26.4
Some	54.7
None	18.9

n = 63

Question 7 (a). Do you feel that too much or too little actual school time is spent on cocurriuclar activities? (a) Too much; (b) Just about right; (c) Too little.

Table 15 indicates that while 9.6% of parents felt that too much school time is spent on the cocurriculum, 67.3% felt that the present use of time is "about right", while almost one quarter felt that too little school time is spent on cocurricular activities.

TABLE 15

Amount of School Time Students Spend on Cocurriuclar Activities

School Time Spent	%
Too much	9.6
About right	67.3
Too little	23.1

n = 53

Question 7 (b). Do you feel that too much or too little of the pupils' free time is spent on cocurriuclar participations? (a) Too much; (b) Too little; (c) About right.

Table 16 shows that the majority of parents felt content with the present use of pupils' free time. 25% felt that too little free time is spent on cocurriuclar activities. (Free time is defined as being non-credit bearing time in school.)

TABLE 16

Amount of Pupils' Free Time Spent on Cocurricular Activities

Free Time Spent	%
Too much	11.5
Too little	25.0
About right	63.5

n = 53

Question 8. Do you feel that taking part in school activities helps to teach young people how to use leisure time? That is, does it help to develop good leisure-time interests and hobbies? (a) Yes; (b) Some; (c) None.

Table 17 presents support from 98% of parents that cocurricular participations help develop good use of leisure time.

TABLE 17

Contribution of Cocurriuclar Participations to the Development of Good Use of Leisure Time

Value to Good Use of Leisure Time	%
Yes	61.5
Some	36.5
None	1.9

n = 53

Question 9 (a). Is it possible that some kinds of cocurriuclar activities do more to fulfil the aims of education than others? Do you feel that a greater contribution is made by athletic or non-athletic activities? (a) Athletic; (b) Non-athletic; (c) About the same.

Table 18 indicates that 58% of parents felt that there was no difference between athletic and non-athletic participations to the fulfilment of the aims of education. The remaining respondents are almost equally divided as to the relative value to education of athletic and non-athletic activities.

TABLE 18

Relative Contribition of Athletic and Non-athletic Activities to the Aims of Education

Contribution by Activity	%
Athletic	20.0
Non-athletic	22.0
Same	58.0

n = 53

Question 9 (b). Of the non-athletic activities, which do you consider most valuable? (Check 3)

There were thirteen categories of activities provided for parents' responses. Table 19 lists the activities in the rank order selected by the respondents. The primary position of "occupation-type clubs" reflects the nature of the population used for this study since all students included must have been registered in ten or more credits in an industrial-vocational program.

TABLE 19

Parents' Selection of Non-athletic Activities by Relative Value to Students' Development

Activity/Club (Rank Order)	Frequency of Responses	%
(1) Occupation	30	22.0
(2) Discussion/Debate	18	13.0
(3) Government/S.U.	15	11.0
(4) Hobby	13	9.0
(5) Dance	11	7.5
(6) Religious	10	7.0
(7) Subject (e.g. science)	9	6.5
(8) Social	9	6.5
(9) Drama	8	5.5
(10) Journalism	7	5.0
(11) Music	5	3.5
(12) Service	4	3.0
(13) Other	1	0.5
TOTAL	140	100.0

Question 9 (c). Of the athletic activities, which do you consider most valuable to a student's development? (Check 3)

Table 20 shows that, of the team sports, basketball was considered most valuable by parents.

This could be explained by the fact that during the past two years major emphasis of time, finances and promotion has been given to basketball in the school with the inauguration of the V.C.H.S. International Invitational Basketball Tournament. Large numbers of staff and students were recruited to facilitate and implement the tournament with most positive results for the internal climate and external image of the school.

The individual-sport considered most valuable to a student's development by parents was track and field. Eight parents suggested additional activities: tennis (2); swimming (3); water polo (2), and outdoor education. It is noted that all of these additional suggested activities have been available in the past but were discontinued through lack of interest and participation.

TABLE 20

Parents' Selection of Athletic Activities
by Relative Value to Students' Development

Athletic Activity (Rank Order)	Frequency of Responses	%
(1) Basketball	35	26.0
(2) Track and Field	20	15.0
(3) Volleyball	19	14.0
(4) Soccer	17	12.0
(5) Softball	14	10.0
(6) Other	8	6.0
(7) Boxing	4	3.0
(7) Curling	4	3.0
(7) Spectating	4	3.0
(8) Bowling	3	2.5
(8) Rugby	3	2.5
(9) Golf	2	1.5
(10) Table Tennis	1	.75
(10) Badminton	1	.75
TOTAL	135	100.00

Question 10. Some schools conduct their cocurricular activities on the pupils' own time. Others have, in addition, an activity period once a week, or once every two weeks. Which do you feel is the better system? (a) Pupils' own time? (b) In school time activity periods; (c) A combination of (a) and (b).

The majority of parents felt that a combination of school and pupils' own time would best facilitate the cocurricular program. Table 21 indicates that 7.8% believed that only pupils' own time should be utilized for cocurricular activities.

TABLE 21

Desirability of Conducting Cocurricular Activities in Pupils' Time or School Time

Time Allocation	%
Pupils' time	7.8
School time	13.7
Combination	78.4

n = 51

Question 11. Do you feel that taking part in cocurricular activities should be limited to those students who can keep their school marks up to a satisfactory standard, or should pupils be allowed to take part regardless of school marks? (a) Should be limited; (b) No limits.

Sherritt (1964) noted that this is a perennial question (p. 55). The pendulum of public, parental and educators' opinion is in constant motion. Table 22 indicates that rather more than half of the responding parents favoured some limits to pupils' participation.

TABLE 22

Limits to Participation in Cocurricular Activity Programs

Limits to Participation	%
No	45.1
Yes	54.9

n = 51

Question 12. Can you suggest any cocurricular activities that the school should offer in addition to its present offerings?

Nine parents offered suggestions. Of these six suggested non-athletic activities such as family-life skills training, ballet, beauty-grooming club, drug and alcohol seminars. Three parents repeated their requests for a tennis and an outdoor-education club.

Question 13. What, in your opinion, is the greatest benefit a pupil gets from taking part in school activities?

This question provided parents an opportunity to offer free comments. Responses were coded into three categories: Leadership; Social Development, and Sportsmanship.

Table 23 indicates that of the thirty parental responses, the development of social confidence was considered the most important benefit that may be derived from taking part in the cocurriculum.

TABLE 23

Most Valuable Benefits Derived from
Cocurriuclar Participations

Benefits	%
Leadership	16.7
Social confidence	76.7
Sportsmanship	6.7

n = 30

Question 14. Additional comments or ideas you might have on the value or otherwise of cocurricular activities.

Ten parents responded. Of these, eight offered comments supportive of the cocurriculum. These included:

- provides for the development of broader interests;
- promotes self-directedness and discipline;
- provides fun while learning;
- part of total education;
- teaches responsibility regardless of home attitude;
- wish sone would do more;
- provides opportunities to visitations to other schools, and, at times, other cities and countries;

The two negative responses were:

- sports are O.K., but, unless one is a pro - they do not help make a living;
- a waste of time.

Question 15. Which aspect of the school, academic or cocurricular, do you feel your child should spend more time on? (a) Academic work; (b) Cocurriculum; (c) What he is doing now.

This final question showed that 52% of parents approved of their child's present utilization of time.

TABLE 24

Allocation of Pupils' Time in School

Time Allocation	%
Current	52.0
More time on academics	36.0
More time on cocurriculum	12.0

n = 50

This chapter has presented a data analysis based on responses from student and parent questionnaires. A series of crosstabulations were carried out to determine possible relationships between a number of variables. These data will be used to test for support or non-support of the hypotheses stated in Chapter 1.

Tables 2 and 3 provide the data on which the first hypothesis is examined. Tables 7 and 8 provide information with regard to the third hypothesis, and the data presented in Tables 4 and 6 permit an examination of the fourth hypothesis.

CHAPTER V

CONCLUSIONS, DISCUSSION & RECOMMENDATIONS

The basic purpose of this study was to assess the relationship of student participation in a high school cocurriculum to student achievement in vocational and T & S vocational programs at a Composite High School.

The procedure for the study required students in vocational and T & S programs and their parents reporting their views on the co-curriculum. Four hypotheses were examined. In addition, parental responses provided information to a number of questions related to students' cocurricular participation.

This study was limited to explore the relationship of co-curricular participation to high school students' program specific achievement. The delimitations in this study were:

1. It was restricted to the vocational and T & S programs at Victoria Composite High School, Edmonton, Alberta;
2. It included only those students who were enrolled in the program during the 1981-82 school year;
3. Results obtained may apply only to the programs and instruments specified at Victoria Composite High School unless similar results using similar instruments have been found previously.

This chapter provides the conclusions reached following an analysis of the data collected. In addition, a discussion of the conclusions, recommendations for possible action and areas for additional research are suggested.

Conclusions

Hypothesis 1. Students who participate in the cocurriculum demonstrate higher achievement levels in vocational and T & S vocational programs than do non-participants.

The first hypothesis is supported.

Hypothesis 2. Students who participate in non-athletic activities demonstrate higher achievement levels in vocational and T & S vocational programs.

The second hypothesis is not supported.

Hypothesis 3. The greater the level of parental support for the cocurriculum, the higher the number of vocational and T & S vocational students participating.

The third hypothesis is supported.

Hypothesis 4. The greater the students' commitment to participation in the cocurriculum the higher the level of their achievement in vocational and T & S vocational programs.

The fourth hypothesis is not supported.

Discussion

These data reported in Table 2 supported the first hypothesis. It indicated that of the 49.2% of students who achieved a mark in excess of 65% (grade "B" or better), 34.2% were participants in the cocurriculum. Table 3 indicated that when participations were specified as non-athletic and athletic, and each was crosstabulated by students' vocational marks, support for the hypothesis was indicated in regard to both non-athletic and athletic participations.

These data also showed that the most preferred number of participations by students were one non-athletic activity and from one to

four athletic activities. This related in the greatest number of students achieving a mark of 65% or above. The implication of the information may be that students participating in excess of one non-athletic and four athletic activities may be utilizing the time and energies that might be better applied to their vocational program of studies.

The second hypothesis was not supported from the data reported in Table 3. As was noted in support of the first hypothesis, participating students generally achieved higher marks in their vocational program than did non-participants. It was, however, indicated in these data that students' vocational achievement was higher when their participations were in athletic rather than non-athletic activities.

This finding is contrary to that found by Sherritt (1964). This might be explained by the fact that emphasis had been placed at Victoria Composite High School on maximizing student involvement in athletic activities. The success of this emphasis was further identified in Table 3. It showed that 80% of respondents engaged in athletic and 50% engaged in non-athletic activities.

The third hypothesis was tested through crosstabulating a number of variables that indicated 'parental support' by the variable of "number of students participating". Support for the hypothesis was indicated in Tables 7 and 8 to be approximately 60%. When parents viewed there to be no value to be derived from cocurricular participation, there was less than 7% student participation.

The fourth hypothesis was concerned with students' commitment to participation in relation to their vocational achievement. "Commitment to participation" was indicated by the following variables, (1) the number of hours per week a student commits to the cocurriculum; (2) the students' perception of how they rated their participation level in the cocurriculum compared to other students; (3) the holding of an office

in an activity; (4) the receipt of an award for some significant participation.

Table 4 showed support in variable (1) for the fourth hypothesis. These data indicated that students who committed eleven or more hours per week to participations achieved a mark of 65% or better more frequently than did students whose participations totalled fewer hours per week.

The second variable was reported in Table 6. The table was divided into two parts: Table 6 (a) provided data related to non-athletic participations, and Table 6 (b) provided data related to athletic participations.

Table 6 (a) did not support the fourth hypotheses. Twelve (19.4%) of respondents achieved marks of 65% or better when perceptions with regard to non-athletic participations were "medium" or "high". "Low" perceptions were indicated by 19 (30.1%) students achieving 65% or better.

Table 6 (b) supported the hypothesis. These supportive data presented in Table 6 (b) are almost exactly the reverse of data presented in Table 6 (a). This dichotomy may merely reflect the increased emphasis on athletics resulting from the new administrative initiative.

Variables (3) and (4) were found not to support the fourth hypothesis. The holding of office and the "receipt of an award" were, as noted, considered indicators of students' commitment to some aspect of the cocurriculum. These recognitions are usually given to those who have displayed long-term commitment to an activity.

Table 5 reported that 3.2% of students had held office, and 12.7% had received a cocurricular award. These data indicated that while more than 60% of students participated in the cocurriculum, few appeared willing, or possibly able, to achieve peer recognition for leadership and outstanding contribution to an activity.

This analysis would appear to be supported by parental responses. In Tables 11 and 12 more than 90% of parents recognized the value of co-curricular participation in the development of leadership and citizenship qualities, and in Tables 15 and 16 almost 25% of parents felt that students spend too little of their school time and free time on cocurricular activities.

The history of difficulties, and some present problems, experienced by many of the students who comprised this study's population, may, in part, be due to their inability to make long-term commitments to the K-12 sphere of the educational enterprise. Many agencies are actively engaged in seeking remedial programs to alleviate the problem.

The further promotion of cocurricular participations may provide one avenue for investigation.

In addition to providing data that allowed the testing of the four hypotheses, the parental questionnaire provided opinions to specific questions. These data, contained in Tables 9 to 24, are reported below:

1. Cocurricular activities are considered valuable to adolescent development, especially to the areas of citizenship and leadership and good use of leisure time (Tables 10, 11, 12, 17);
2. The positive effect of the cocurriculum on schoolwork, homework and marks, and students' attitude to schoolwork, was noted by the majority of parents (Tables 13, 14);
3. The majority of parents were content with the present utilization of schooltime and students' free time for cocurricular activities. However, one quarter indicated that they felt more time should be devoted to the cocurriculum (Tables 15, 16, 21, 24);
4. Most parents viewed the relative contributions made by athletic and non-athletic activities to be about equal (Table 11);

5. Slightly more than half of the respondents felt that taking part in the cocurriculum should be limited to those students who could keep their marks up to a satisfactory level (Table 22);
6. Occupation type clubs were considered the most valuable of non-athletic activities, and basketball was considered the most valuable athletic activity to students' development (Tables 19, 20);
7. Additional activities suggested by nine parents included family-life skills training, drug and alcohol seminars, a ballet club, a beauty and grooming club, a tennis club and an outdoor-education club;
8. The most valuable benefit derived from cocurricular participation was considered by more than three quarters of respondents to be "social confidence". The second and third most valuable benefits were leadership and sportsmanship respectively (Table 23).

Recommendations

Results from this investigation showed that participation in cocurricular activities made a contribution to students' achievement in vocational and T & S vocational programs. It is, therefore, recommended that:

1. Efforts be made to encourage all vocational and T & S vocational students to participate in the cocurriculum;
2. A student survey be conducted to assess the interest and need for specific cocurricular activities, and that those activities most frequently requested by initiated, if possible;
3. That non-athletic and athletic activities be promoted and facilitated equally;
4. That parental support for the cocurriculum, as indicated in this study, be increased through better communication, and that the possibility of direct parent involvement in the cocurriculum be studied.

The following areas for further research are suggested:

1. The relationship between cocurricular participation and student achievement levels in other high school program specific areas, e.g. Academic, Business, Trainable Mentally Handicapped;
2. The relationship between cocurricular participation and student participation and student achievement levels in the junior high school.
3. To expand this exploratory, descriptive study to include additional variables such as: personality profiles of cocurricular activity leaders; student participation and program achievement levels according to sex and correlational statistics.

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APPENDICES

Below is a chart listing the extracurricular activities in your school, and columns asking questions about your participation. Please fill in each space, either with a number, a word, or a check, as called for. It is best to fill in responses across the page for each activity.

ACTIVITY	I participate in this activity YES	NO	Amount of time spent per week in hours	I hold an office or position in this activity. (If YES, name it. If NO, write NO).	I have received an award, letter or some recognition in this activity YES	NO	I would rate my participation compared to others HIGH	MEDIUM	LOW
1. Students' Council									
2. House System									
3. Library Assistance									
4. Stage Assistance (lighting, sound crews)									
5. Audio-Visual Club									
6. Newspaper									
7. Year Book									
8. Graduation Committee									
9. Science Club									
10. Math Club									
11. Games Club (Bridge, Chess, etc.)									
12. Hobby Club									
13. Photography Club									
14. Dancing									
15. Junior Achievement									
16. Model Building									

(continued)

ACTIVITY	I participate in this activity YES	NO	Amount of time spent per week in hours	I hold an office or position in this activity. (If YES, name it. If NO, write NO).	I have received an award, letter or some recognition in this activity. YES	NO	I would rate my participation compared to others as :- HIGH	MEDIUM	LOW
17. Drama Club									
18. Public Speaking									
19. Debating									
20. Art Club									
21. French Club									
22. Religion Club									
OTHER: 23.									
24.									
25.									
26.									
ATHLETICS (Inter-School)									
27. Basketball									
28. Volleyball									
29. Football									
30. Track and Field									
31. Badminton									
32. Curling									

(continued)

ACTIVITY	I participate in this activity YES	NO	Amount of time spent per week in hours	I hold an office or position in this activity.(If YES, name it. If NO, write NO).	I have received an award, letter or some recognition in this activity. YES	NO	I would rate my participation compared to others as :- HIGH	MEDIUM	LOW
ATHLETICS (Within school)									
33. Soccer									
34. Basketball									
35. Fastball									
36. Volleyball									
37. Floor Hockey									
38. Weightlifting									
39. Badminton									
40. Touch Football									
41. Swimming									
42. Cheerleading									
43. Golf Club									
44. Ski Club									
45. Wrestling Club									
OTHER(Activities not listed)									
46. _____									
47. _____									

APPENDIX II

Number ___

PARENTS' QUESTIONNAIRE ON CO-CURRICULAR ACTIVITIES

DIRECTIONS

You are the Father ___ / Mother ___ / Guardian ___ of a Boy ___ / Girl ___ in Grade 11 or T & S Yr. 03 ___ (Please check)

How do you feel about your child's participation in the co-curricular activities program of the school? Do you feel that the time a student spends in school athletics, clubs, and other out-of-class activities contributes anything to his/her education? This is what I would like to find out from you, by having you fill out this Questionnaire.

Please answer the questions in terms of your own child. If you have more than one child in those grades, answer the question in terms of the one who is the oldest.

Do not put your name or address on this paper, unless you would like a copy of the results of this survey.

Please answer every question.

Please mail the completed Questionnaire as soon as possible. A stamped return envelope is enclosed.

QUESTIONNAIRE

(1) Would you describe the amount of time your child spends on co-curricular activities (both athletic and on-athletic) as: (check one):

(a) Spends all his spare time _____( )

(b) Spends almost all his spare time _____( )

(c) Spends some time _____( )

(d) Spends no time (does not take part) _____( )

(2) Do you feel that taking part in co-curricular activities is helping to further your child's education?

Very much_____ Some_____ None_____

(3) Do you feel that taking part in school activities will help your child to become a better citizen? That is, is it helping him develop a sense of responsibility and the ability to work with others?

Very much_____ Some_____ None_____

(4) Do you feel that taking part in school activities helps to develop qualities of leadership?

Very much_____ Some_____ None_____

(5) Do you feel that extra-curricular activities tend to have a good effect or a bad effect on school work, homework, and school marks?

Good effect_____ No effect_____ Bad effect_____

(6) Do you feel that taking part in school activities is helping to create a better attitude toward school work on the part of your child? That is, makes him more enthusiastic about school work?

Very much_____ Some_____ None_____

(7) (a) Do you feel that too much or too little actual school time (teaching periods throughout the day) is spent on extra-curricular activities?

Too much time_____ Just about right_____ Too little_____

(b) Do you feel that too much, or too little of the pupil's free time (noon hour, after school) is spent on extra-curricular activities?

Too much time_____ Just about right_____ Too little_____

(8) Do you feel that taking part in school activities helps to teach young people how to use leisure time? That is, does it help to develop good leisure time interests or hobbies?

Yes_____ To some extent_____ No_____

(9) (a) Is it possible that some kinds of co-curricular activities do more to fulfill the aims of education than others? Do you feel that a greater contribution is made by athletic activities or non-atheltics activities such as those listed in part (b) below?

Athletic_____ Non-Athletic_____ About the same_____

(b) Of the non-athletic activities, which activities do you consider most valuable? (Check the three most valuable):

1. Service-social type clubs (Boosters, Cheerleaders).....___
2. Religious-type clubs (Inter-School Christian Fellowship)...___
3. Occupation-type clubs (Electricity, Beauty Culture).....___
4. School Government (Student Council).....___
5. Discussion-type clubs (Debating, Public Speaking).....___
6. Dramatic Activities (Variety Show, Plays).....___
7. Music activities (Choir, Band).....___
8. Dancing activities (Lunch hour, Evening).....___
9. Journalism activities (School Paper, Annual).....___
10. Hobby-type clubs (Photography, Stamp)... ....___
11. School service clubs (Public Address, Art Service).....___
12. Subject-type club (French, Science).....___
13. Any other (specify)_____
_____
_____ ___

(c) Of the athletic activities, which do you consider most valuable? (Check the three most valuable):

Team Sports		Individual Sports	
1. Basketball	___	6. Track & Field	___
2. Soccer	___	7. Badminton	___
3. Rugby	___	8. Curling	___
4. Softball	___	9. Golf	___
5. Volley Ball	___	10. Table Tennis	___
		11. Boxing	___
		12. Bowling	___
		13. Spectating	___
		14. Others (state):_____	___

(10) Some schools conduct their co-curricular activities on the pupil's own time. Others have, in addition, an activity period once a week, or once every two weeks, when club meetings are held. Which do you feel is the better system:

(a) Pupil's own time_____ (b) Activity periods in school_____

(c) A combination of (a) and (b)_____

(11) Do you feel that taking part in co-curricular activities should be limited to those students who can keep their school marks up to a satisfactory standard, or should all pupils be allowed to take part regardless of school marks?

Should be limited_____ No limites_____

(12) Can you suggest any co-curricular activities that the school should offer in addition to the ones it already offers?

_____

_____

(13) What, in your opinion, is the greatest benefit a pupil gets from taking part in school activities?

_____

_____

(14) Additional comments or ideas you might have on the value or otherwise of extra-curricular activities:

_____

_____

(15) Which aspect of school, academic or co-curricular, do you feel your child should spend more time on:

More time on academic work_____ More time on co-curricular activities_____

Just about what he or she is doing now_____

Victoria Composite High School
10210-108 Avenue Edmonton, Alberta T5H 1A8 426-3010

Dear Parent/Guardian,

I would appreciate a few minutes of your time to complete the attached questionnaire.

Many students at Victoria Composite are involved in a wide range of activities that are outside of their regular classroom work. Clubs, dances and sports events are some of the activities that are commonly called the cocurriculum.

The study I am conducting will attempt to research the relationship between the students' participation in the cocurriculum and their achievement in their industrial-vocational education courses.

This study is part of my Master of Education program at the University of Alberta. It is hoped that the information gained from this research may allow recommendations to be made to further improve the total educational program for your son/daughter.

Thank you in advance for your co-operation and time.

A quick return of the completed questionnaire in the enclosed stamped addressed envelope would be very much appreciated.

Sincerely,

Michael Alpern,
Department Head - Vocational Education.

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DEFAULT SPACE ALLOCATION..      ALLOWS FOR..    102 TRANSFORMATIONS
WORKSPACE      71680 BYTES                      409 RECODE VALUES + LAG VARIABLES
TRANSPACE      10240 BYTES                     1641 IF/COMPUTE OPERATIONS

     1 VARIABLE LIST   ID, V1 TO V33
     2 INPUT MEDIUM    DISK
     3 N OF CASES      68
     4 INPUT FORMAT    FIXED(F5.0,3F1.0,2X,10F1.0,6F2.0,1X,4F1.0,1X,F1.0,1X,
     5                 F1.0,1X,2F2.0,5F1.0,2X,F2.0)
```

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

VARIABLE	FORMAT	RECORD	COLUMNS
ID	F 5. 0	1	1- 5
V1	F 1. 0	1	6- 6
V2	F 1. 0	1	7- 7
V3	F 1. 0	1	8- 8
V4	F 1. 0	1	11- 11
V5	F 1. 0	1	12- 12
V6	F 1. 0	1	13- 13
V7	F 1. 0	1	14- 14
V8	F 1. 0	1	15- 15
V9	F 1. 0	1	16- 16
V10	F 1. 0	1	17- 17
V11	F 1. 0	1	18- 18
V12	F 1. 0	1	19- 19
V13	F 1. 0	1	20- 20
V14	F 2. 0	1	21- 22
V15	F 2. 0	1	23- 24
V16	F 2. 0	1	25- 26
V17	F 2. 0	1	27- 28
V18	F 2. 0	1	29- 30
V19	F 2. 0	1	31- 32
V20	F 1. 0	1	34- 34
V21	F 1. 0	1	35- 35

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

VARIABLE	FORMAT	RECORD	COLUMNS
V22	F 1. 0	1	36- 36
V23	F 1. 0	1	37- 37
V24	F 1. 0	1	39- 39
V25	F 1. 0	1	41- 41
V26	F 2. 0	1	43- 44
V27	F 2. 0	1	45- 46
V28	F 1. 0	1	47- 47
V29	F 1. 0	1	48- 48
V30	F 1. 0	1	49- 49
V31	F 1. 0	1	50- 50
V32	F 1. 0	1	51- 51
V33	F 2. 0	1	54- 55

THE INPUT FORMAT PROVIDES FOR 34 VARIABLES. 34 WILL BE READ
IT PROVIDES FOR 1 RECORDS ('CARDS') PER CASE. A MAXIMUM OF 55 'COLUMNS' ARE USED ON A RECORD.

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 6 RECODE          V33 (LO THRU 49=1)
 7                     (50 THRU 64=2)
 8                     (65 THRU 79=3)
 9                     (80 THRU HI=4)
10 RECODE          ALL(BLANK=999)
11 MISSING VALUES  ALL(999)
12 VAR LABELS      ID, ID/
13                 V1, PARENT/
14                 V2, SEX/
15                 V3, GRADE/
16                 V4, CO-CURRICULAR TIME/
17                 V5, VALUE TO EDUCATION/
18                 V6, CITIZENSHIP/
19                 V7, LEADERSHIP/
20                 V8, EFFECT ON SCHOOL WORK/
21                 V9, ATTITUDE TOWARD SCHOOL WORK/
22                 V10, SCHOOL TIME/
23                 V11, FREE TIME/
24                 V12, DEVELOP LEISURE INTERESTS/
25                 V13, CONTRITBUTION OF CO-CURRICULAR ACTIVITIES/
26                 V14, NON-ATHLETIC - 1/
27                 V15, NON-ATHLETIC - 2/
28                 V16, NON-ATHLETIC - 3/
29                 V17, ATHLETIC - 1/
30                 V18, ATHLETIC - 2/
31                 V19, ATHLETIC - 3/
32                 V20, TIME OF ACTIVITIES/
33                 V21, STUDENT LIMITATION/
34                 V22, ADDITIONAL ACTIVITIES/
35                 V23, BENEFITS/
36                 V24, EXTRA-CURRICULAR VALUE/
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                    V25, SPEND MORE TIME ON:/
                    V26, NO OF PARTICIPATIONS, NON-ATHLETIC/
                    V27, NO OF PARTICIPATIONS, ATHLETIC/
                    V28, NO OF HOURS/
                    V29, OFFICES HELD/
                    V30, AWARDS/
                    V31, ATHLETIC PARTICIPATION LEVEL/
                    V32, NON-ATHLETIC PARTICIPATION LEVEL/
                    V33, IND-VOC MARK/
 VALUE LABELS       V1 (1) FATHER (2) MOTHER (3) GUARDIAN/
                    V2 (1) BOY (2) GIRL/
                    V3 (1) GRADE 11(2) T & S YR/
                    V4 (1) NO TIME (2) SOME (3) ALMOST ALL (4) ALL/
                    V5 (2) NONE (3) SOME (4) VERY MUCH/
                    V6 (2) NONE (3) SOME (4) VERY MUCH/
                    V7 (2) NONE (3) SOME (4) VERY MUCH/
                    V8 (2) BAD (3) NONE (4) GOOD/
                    V9 (2) NONE (3) SOME (4) VERY MUCH/
                    V10 (2) TOO MUCH (3) ABOUT RIGHT (4) TOO LITTLE/
                    V11 (2) TOO MUCH (3) ABOUT RIGHT (4) TOO LITTLE/
                    V12 (2) NO (3) SOME (4) YES/
                    V13 (1) ATHLETIC (2) NON-ATHLETIC (3) SAME/
                    V14,V15,V16 (11) SOCIAL (12) RELIGIOUS (13) OCCUPATION
                    (14) GOVERNMENT (15) DISCUSSION (16) DRAMATIC
                    (17) MUSIC (18) DANCE (19) JOURNALISM
                    (20) HOBBY (21) SCHOOL SERVICE (22) SUBJECT
                    (23) OTHER/
                    V17,V18,V19 (11) BASKETBALL (12) SOCCER (13) RUGBY
                    (14) SOFTBALL (15) VOLLEYBALL (16) TRACK
                    (17) BADMINGTON (18) CURLING (19) GOLF
                    (20) TABLE TENNIS (21) BOXING (22) BOWLING
                    (23) SPECTATING (24) OTHER/
                    V20 (1) OWN TIME (2) SCHOOL TIME (3) COMBINATION/
                    V21 (1) NO (2) YES/
                    V22 (1) ATHLETIC (2) NON-ATHLETIC/
                    V23 (1) LEADERSHIP (2) SOCIAL (3) SPORTSMANSHIP/
                    V24 (1) NEGATIVE (2) POSITIVE/
                    V25 (1) CURRENT (2) ACADEMIC (3) CO-CURRICULAR /
                    V28 (1) 5 OR LESS (2) 6 TO 10 (3) 11 OR MORE/
                    V29,V30 (1) YES (2) NO/
                    V31,V32 (1) LOW (2) MEDIUM (3) HIGH/
                    V33 (1) < 50 (2) 50-64 (3) 65-79 (4) 80 +/
 FREQUENCIES        GENERAL=V1 TO V33

GIVEN WORKSPACE ALLOWS FOR   5120 VALUES AND   1536 LABELS PER VARIABLE FOR 'FREQUENCIES'
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FILE NONAME (CREATION DATE = 05/21/82)

V1 PARENT

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
FATHER	1.	19	27.9	35.8	35.8
MOTHER	2.	32	47.1	60.4	96.2
GUARDIAN	3.	2	2.9	3.8	100.0
	999.	15	22.1	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 53 MISSING CASES 15

FILE NONAME (CREATION DATE = 05/21/82)

V2 SEX

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
BOY	1.	35	51.5	66.0	66.0
GIRL	2.	18	26.5	34.0	100.0
	999.	15	22.1	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 53 MISSING CASES 15

FILE NONAME (CREATION DATE = 05/21/82)

V3 GRADE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
GRADE 11	1.	35	51.5	66.0	66.0
T & S YR	2.	18	26.5	34.0	100.0
	999.	15	22.1	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 53 MISSING CASES 15

FILE NONAME (CREATION DATE = 05/21/82)

V4 CO-CURRICULAR TIME

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NO TIME	1.	12	17.6	22.6	22.6
SOME	2.	37	54.4	69.8	92.5
ALMOST ALL	3.	3	4.4	5.7	98.1
ALL	4.	1	1.5	1.9	100.0
	999.	15	22.1	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 53 MISSING CASES 15

FILE NONAME (CREATION DATE = 05/21/82)

V5 VALUE TO EDUCATION

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NONE	2.	7	10.3	13.5	13.5
SOME	3.	36	52.9	69.2	82.7
VERY MUCH	4.	9	13.2	17.3	100.0
	999.	16	23.5	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 52 MISSING CASES 16

FILE NONAME (CREATION DATE = 05/21/82)

V6 CITIZENSHIP

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NONE	2.	2	2.9	3.8	3.8
SOME	3.	29	42.6	54.7	58.5
VERY MUCH	4.	22	32.4	41.5	100.0
	999.	15	22.1	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 53 MISSING CASES 15

FILE NONAME (CREATION DATE = 05/21/82)

V7 LEADERSHIP

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NONE	2.	2	2.9	3.8	3.8
SOME	3.	23	33.8	44.2	48.1
VERY MUCH	4.	27	39.7	51.9	100.0
	999.	16	23.5	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 52 MISSING CASES 16

FILE NONAME (CREATION DATE = 05/21/82)

V8 EFFECT ON SCHOOL WORK

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
BAD	2.	6	8.8	11.5	11.5
NONE	3.	20	29.4	38.5	50.0
GOOD	4.	26	38.2	50.0	100.0
	999.	16	23.5	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 52 MISSING CASES 16

FILE NONAME (CREATION DATE = 05/21/82)

V9 ATTITUDE TOWARD SCHOOL WORK

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NONE	2.	10	14.7	18.9	18.9
SOME	3.	29	42.6	54.7	73.6
VERY MUCH	4.	14	20.6	26.4	100.0
	999.	15	22.1	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 53 MISSING CASES 15

FILE NONAME (CREATION DATE = 05/21/82)

V10 SCHOOL TIME

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
TOO MUCH	2.	5	7.4	9.6	9.6
ABOUT RIGHT	3.	35	51.5	67.3	76.9
TOO LITTLE	4.	12	17.6	23.1	100.0
	999.	16	23.5	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 52 MISSING CASES 16

FILE NONAME (CREATION DATE = 05/21/82)

V11 FREE TIME

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
TOO MUCH	2.	6	8.8	11.5	11.5
ABOUT RIGHT	3.	33	48.5	63.5	75.0
TOO LITTLE	4.	13	19.1	25.0	100.0
	999.	16	23.5	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 52 MISSING CASES 16

FILE NONAME (CREATION DATE = 05/21/82)

V12 DEVELOP LEISURE INTERESTS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NO	2.	1	1.5	1.9	1.9
SOME	3.	19	27.9	36.5	38.5
YES	4.	32	47.1	61.5	100.0
	999.	16	23.5	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 52 MISSING CASES 16

FILE NONAME (CREATION DATE = 05/21/82)

V13 CONTRITBUTION OF CO-CURRICULAR ACTIVITIE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
ATHLETIC	1.	10	14.7	20.0	20.0
NON-ATHLETIC	2.	11	16.2	22.0	42.0
SAME	3.	29	42.6	58.0	100.0
	999.	18	26.5	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 50 MISSING CASES 18

FILE NONAME (CREATION DATE = 05/21/82)

V14 NON-ATHLETIC - 1

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
SOCIAL	11.	9	13.2	18.4	18.4
RELIGIOUS	12.	10	14.7	20.4	38.8
OCCUPATION	13.	21	30.9	42.9	81.6
GOVERNMENT	14.	6	8.8	12.2	93.9
DISCUSSION	15.	3	4.4	6.1	100.0
	999.	19	27.9	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 49 MISSING CASES 19

FILE NONAME (CREATION DATE = 05/21/82)

V15 NON-ATHLETIC - 2

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
OCCUPATION	13.	9	13.2	19.1	19.1
GOVERNMENT	14.	8	11.8	17.0	36.2
DISCUSSION	15.	14	20.6	29.8	66.0
DRAMATIC	16.	6	8.8	12.8	78.7
MUSIC	17.	1	1.5	2.1	80.9
DANCE	18.	4	5.9	8.5	89.4
JOURNALISM	19.	1	1.5	2.1	91.5
HOBBY	20.	3	4.4	6.4	97.9
OTHER	23.	1	1.5	2.1	100.0
	999.	21	30.9	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 47 MISSING CASES 21

FILE NONAME (CREATION DATE = 05/21/82)

V16 NON-ATHLETIC - 3

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
GOVERNMENT	14.	2	2.9	4.3	4.3
DISCUSSION	15.	1	1.5	2.2	6.5
DRAMATIC	16.	2	2.9	4.3	10.9
MUSIC	17.	4	5.9	8.7	19.6
DANCE	18.	7	10.3	15.2	34.8
JOURNALISM	19.	6	8.8	13.0	47.8
HOBBY	20.	10	14.7	21.7	69.6
SCHOOL SERVICE	21.	4	5.9	8.7	78.3
SUBJECT	22.	9	13.2	19.6	97.8
	24.	1	1.5	2.2	100.0
	999.	22	32.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 46 MISSING CASES 22

FILE NONAME (CREATION DATE = 05/21/82)

V17 ATHLETIC - 1

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
BASKETBALL	11.	35	51.5	68.6	68.6
SOCCER	12.	8	11.8	15.7	84.3
RUGBY	13.	1	1.5	2.0	86.3
SOFTBALL	14.	2	2.9	3.9	90.2
VOLLEYBALL	15.	2	2.9	3.9	94.1
TRACK	16.	1	1.5	2.0	96.1
CURLING	18.	1	1.5	2.0	98.0
SPECTATING	23.	1	1.5	2.0	100.0
	999.	17	25.0	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 51 MISSING CASES 17

FILE NONAME (CREATION DATE = 05/21/82)

V18 ATHLETIC - 2

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
SOCCER	12.	8	11.8	16.7	16.7
RUGBY	13.	1	1.5	2.1	18.8
SOFTBALL	14.	12	17.6	25.0	43.8
VOLLEYBALL	15.	11	16.2	22.9	66.7
TRACK	16.	12	17.6	25.0	91.7
GOLF	19.	1	1.5	2.1	93.8
TABLE TENNIS	20.	1	1.5	2.1	95.8
BOXING	21.	2	2.9	4.2	100.0
	999.	20	29.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 48 MISSING CASES 20

FILE NONAME (CREATION DATE = 05/21/82)

V19 ATHLETIC - 3

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
SOCCER	12.	1	1.5	2.2	2.2
VOLLEYBALL	15.	6	8.8	13.0	15.2
TRACK	16.	18	26.5	39.1	54.3
BADMINGTON	17.	1	1.5	2.2	56.5
CURLING	18.	3	4.4	6.5	63.0
GOLF	19.	2	2.9	4.3	67.4
BOXING	21.	2	2.9	4.3	71.7
BOWLING	22.	3	4.4	6.5	78.3
SPECTATING	23.	2	2.9	4.3	82.6
OTHER	24.	8	11.8	17.4	100.0
	999.	22	32.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 46 MISSING CASES 22

FILE NONAME (CREATION DATE = 05/21/82)

V20 TIME OF ACTIVITIES

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
OWN TIME	1.	4	5.9	7.8	7.8
SCHOOL TIME	2.	7	10.3	13.7	21.6
COMBINATION	3.	40	58.8	78.4	100.0
	999.	17	25.0	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 51 MISSING CASES 17

FILE NONAME (CREATION DATE = 05/21/82)

V21 STUDENT LIMITATION

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NO	1.	23	33.8	45.1	45.1
YES	2.	28	41.2	54.9	100.0
	999.	17	25.0	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 51 MISSING CASES 17

FILE NONAME (CREATION DATE = 05/21/82)

V22 ADDITIONAL ACTIVITIES

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
ATHLETIC	1.	3	4.4	33.3	33.3
NON-ATHLETIC	2.	6	8.8	66.7	100.0
	999.	59	86.8	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 9 MISSING CASES 59

FILE NONAME (CREATION DATE = 05/21/82)

V23 BENEFITS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
LEADERSHIP	1.	5	7.4	16.7	16.7
SOCIAL	2.	23	33.8	76.7	93.3
SPORTSMANSHIP	3.	2	2.9	6.7	100.0
	999.	38	55.9	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 30 MISSING CASES 38

FILE NONAME (CREATION DATE = 05/21/82)

V24 EXTRA-CURRICULAR VALUE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NEGATIVE	1.	2	2.9	20.0	20.0
POSITIVE	2.	8	11.8	80.0	100.0
	999.	58	85.3	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 10 MISSING CASES 58

FILE NONAME (CREATION DATE = 05/21/82)

V25 SPEND MORE TIME ON:

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
CURRENT	1.	26	38.2	52.0	52.0
ACADEMIC	2.	18	26.5	36.0	88.0
CO-CURRICULAR	3.	6	8.8	12.0	100.0
	999.	18	26.5	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 50 MISSING CASES 18

FILE NONAME (CREATION DATE = 05/21/82)

V26 NO OF PARTICIPATIONS, NON-ATHLETIC

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	0.	31	45.6	49.2	49.2
	1.	17	25.0	27.0	76.2
	2.	9	13.2	14.3	90.5
	3.	4	5.9	6.3	96.8
	4.	1	1.5	1.6	98.4
	5.	1	1.5	1.6	100.0
	999.	5	7.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 63 MISSING CASES 5

FILE NONAME (CREATION DATE = 05/21/82)

V27 NO OF PARTICIPATIONS, ATHLETIC

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	0.	14	20.6	22.2	22.2
	1.	13	19.1	20.6	42.9
	2.	10	14.7	15.9	58.7
	3.	6	8.8	9.5	68.3
	4.	4	5.9	6.3	74.6
	6.	3	4.4	4.8	79.4
	7.	4	5.9	6.3	85.7
	8.	3	4.4	4.8	90.5
	10.	2	2.9	3.2	93.7
	11.	2	2.9	3.2	96.8
	12.	2	2.9	3.2	100.0
	999.	5	7.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 63 MISSING CASES 5

FILE NONAME (CREATION DATE = 05/21/82)

V28 NO OF HOURS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
5 OR LESS	1.	25	36.8	39.7	39.7
6 TO 10	2.	14	20.6	22.2	61.9
11 OR MORE	3.	24	35.3	38.1	100.0
	999.	5	7.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 63 MISSING CASES 5

FILE NONAME (CREATION DATE = 05/21/82)

V29 OFFICES HELD

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YES	1.	2	2.9	3.2	3.2
NO	2.	61	89.7	96.8	100.0
	999.	5	7.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 63 MISSING CASES 5

FILE NONAME (CREATION DATE = 05/21/82)

V30 AWARDS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YES	1.	8	11.8	12.7	12.7
NO	2.	55	80.9	87.3	100.0
	999.	5	7.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 63 MISSING CASES 5

FILE NONAME (CREATION DATE = 05/21/82)

V31 ATHLETIC PARTICIPATION LEVEL

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
LOW	1.	22	32.4	34.9	34.9
MEDIUM	2.	23	33.8	36.5	71.4
HIGH	3.	18	26.5	28.6	100.0
	999.	5	7.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 63 MISSING CASES 5

FILE NONAME (CREATION DATE = 05/21/82)

V32 NON-ATHLETIC PARTICIPATION LEVEL

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
LOW	1.	39	57.4	61.9	61.9
MEDIUM	2.	13	19.1	20.6	82.5
HIGH	3.	11	16.2	17.5	100.0
	999.	5	7.4	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 63 MISSING CASES 5

FILE NONAME (CREATION DATE = 05/21/82)

V33 IND-VOC MARK

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
< 50	1.	7	10.3	10.3	10.3
50-64	2.	29	42.6	42.6	52.9
65-79	3.	23	33.8	33.8	86.8
80 +	4.	9	13.2	13.2	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 68 MISSING CASES 0

```
TRANSPACE REQUIRED..      200 BYTES
      2 TRANSFORMATIONS
      7 RECODE VALUES + LAG VARIABLES
      0 IF/COMPUTE OPERATIONS

CPU TIME REQUIRED..    0.45 SECONDS


                80 XCROSSTABS     TABLES=V5 TO V9 BY V26+V27

 ***** GIVEN WORKSPACE ALLOWS FOR   4479 CELLS AND    2 DIMENSIONS FOR CROSSTAB PROBLEM *****
```

FILE NONAME (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *

V5 VALUE TO EDUCATION BY V26 NO OF PARTICIPATIONS, NON-ATHLETIC
+V27 NO OF PARTICIPATIONS, ATHLETIC

* PAGE 1 OF 2

V5	V26 +... COUNT / ROW PCT / COL PCT / TOT PCT	0.	1.	2.	3.	4.	5.	6.	7.	8.	10.	ROW TOTAL
NONE	2.	10	2	1	0	0	0	0	1	0	0	14
		71.4	14.3	7.1	0.0	0.0	0.0	0.0	7.1	0.0	0.0	13.5
		25.0	7.7	7.1	0.0	0.0	0.0	0.0	100.0	0.0	0.0	
		9.6	1.9	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	
SOME	3.	24	20	10	6	2	1	2	0	2	2	72
		33.3	27.8	13.9	8.3	2.8	1.4	2.8	0.0	2.8	2.8	69.2
		60.0	76.9	71.4	75.0	66.7	100.0	66.7	0.0	100.0	100.0	
		23.1	19.2	9.6	5.8	1.9	1.0	1.9	0.0	1.9	1.9	
VERY MUCH	4.	6	4	3	2	1	0	1	0	0	0	18
		33.3	22.2	16.7	11.1	5.6	0.0	5.6	0.0	0.0	0.0	17.3
		15.0	15.4	21.4	25.0	33.3	0.0	33.3	0.0	0.0	0.0	
		5.8	3.8	2.9	1.9	1.0	0.0	1.0	0.0	0.0	0.0	
	COLUMN TOTAL	40	26	14	8	3	1	3	1	2	2	104
		38.5	25.0	13.5	7.7	2.9	1.0	2.9	1.0	1.9	1.9	100.0

(CONTINUED)

FILE NONAME (CREATION DATE = 05/21/82)

CROSSTABULATION OF V5 VALUE TO EDUCATION BY V26 NO OF PARTICIPATIONS, NON-ATHLETIC +V27 NO OF PARTICIPATIONS, ATHLETIC

V5	COUNT / ROW PCT / COL PCT / TOT PCT	V26 +... 11.	12.	ROW TOTAL
NONE	2.	0 0.0 0.0 0.0	0 0.0 0.0 0.0	14 13.5
SOME	3.	2 2.8 100.0 1.9	1 1.4 50.0 1.0	72 69.2
VERY MUCH	4.	0 0.0 0.0 0.0	1 5.6 50.0 1.0	18 17.3
	COLUMN TOTAL	2 1.9	2 1.9	104 100.0

NUMBER OF MISSING OBSERVATIONS = 32

FILE NONAME (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *

V6 CITIZENSHIP BY V26 NO OF PARTICIPATIONS, NON-ATHLETIC
+V27 NO OF PARTICIPATIONS, ATHLETIC

* PAGE 1 OF 2

V6	V26 +... COUNT / ROW PCT / COL PCT / TOT PCT	0.	1.	2.	3.	4.	5.	6.	7.	8.	10.	ROW TOTAL
NONE	2.	2	1	0	1	0	0	0	0	0	0	4
		50.0	25.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
		5.0	3.7	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	
		1.9	0.9	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	
SOME	3.	25	12	7	4	1	1	2	0	2	2	58
		43.1	20.7	12.1	6.9	1.7	1.7	3.4	0.0	3.4	3.4	54.7
		62.5	44.4	46.7	50.0	33.3	100.0	66.7	0.0	100.0	100.0	
		23.6	11.3	6.6	3.8	0.9	0.9	1.9	0.0	1.9	1.9	
VERY MUCH	4.	13	14	8	3	2	0	1	1	0	0	44
		29.5	31.8	18.2	6.8	4.5	0.0	2.3	2.3	0.0	0.0	41.5
		32.5	51.9	53.3	37.5	66.7	0.0	33.3	100.0	0.0	0.0	
		12.3	13.2	7.5	2.8	1.9	0.0	0.9	0.9	0.0	0.0	
	COLUMN TOTAL	40	27	15	8	3	1	3	1	2	2	106
		37.7	25.5	14.2	7.5	2.8	0.9	2.8	0.9	1.9	1.9	100.0

(CONTINUED)

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SPSS BATCH SYSTEM                                                                            05/21/82        PAGE   41
FILE    NONAME    (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * *    C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
    V6        CITIZENSHIP                                 BY  V26        NO OF PARTICIPATIONS, NON-ATHLETIC
                                                             +V27        NO OF PARTICIPATIONS, ATHLETIC
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  2 OF  2

                       V26       +...
              COUNT   I
              ROW PCT I                           ROW
              COL PCT I                           TOTAL
              TOT PCT I     11.I       12.I
V6            --------I--------I--------I
                   2. I      0 I      0 I           4
  NONE                I    0.0 I    0.0 I         3.8
                      I    0.0 I    0.0 I
                      I    0.0 I    0.0 I
                     -I--------I--------I
                   3. I      1 I      1 I          58
  SOME                I    1.7 I    1.7 I        54.7
                      I   50.0 I   50.0 I
                      I    0.9 I    0.9 I
                     -I--------I--------I
                   4. I      1 I      1 I          44
  VERY MUCH           I    2.3 I    2.3 I        41.5
                      I   50.0 I   50.0 I
                      I    0.9 I    0.9 I
                     -I--------I--------I
               COLUMN        2        2           106
                TOTAL      1.9      1.9         100.0

NUMBER OF MISSING OBSERVATIONS =        30
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FILE NONAME (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

V7 LEADERSHIP BY V26 NO OF PARTICIPATIONS, NON-ATHLETIC
+V27 NO OF PARTICIPATIONS, ATHLETIC

* PAGE 1 OF 2

V26 +...

V7	COUNT / ROW PCT / COL PCT / TOT PCT	0.	1.	2.	3.	4.	5.	6.	7.	8.	10.	ROW TOTAL
NONE	2.	3	0	1	0	0	0	0	0	0	0	4
		75.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
		7.7	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		2.9	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
SOME	3.	16	11	7	5	1	1	2	0	0	2	46
		34.8	23.9	15.2	10.9	2.2	2.2	4.3	0.0	0.0	4.3	44.2
		41.0	42.3	46.7	62.5	33.3	100.0	66.7	0.0	0.0	100.0	
		15.4	10.6	6.7	4.8	1.0	1.0	1.9	0.0	0.0	1.9	
VERY MUCH	4.	20	15	7	3	2	0	1	1	2	0	54
		37.0	27.8	13.0	5.6	3.7	0.0	1.9	1.9	3.7	0.0	51.9
		51.3	57.7	46.7	37.5	66.7	0.0	33.3	100.0	100.0	0.0	
		19.2	14.4	6.7	2.9	1.9	0.0	1.0	1.0	1.9	0.0	
	COLUMN TOTAL	39	26	15	8	3	1	3	1	2	2	104
		37.5	25.0	14.4	7.7	2.9	1.0	2.9	1.0	1.9	1.9	100.0

(CONTINUED)

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FILE    NONAME    (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * *
   V7        LEADERSHIP                                    BY  V26        NO OF PARTICIPATIONS, NON-ATHLETIC
                                                              +V27        NO OF PARTICIPATIONS, ATHLETIC
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  2 OF  2

                   V26       +...
          COUNT   I
          ROW PCT I                           ROW
          COL PCT I                           TOTAL
          TOT PCT I     11.I     12.I
V7        --------I--------I--------I
               2. I      0 I      0 I       4
  NONE            I    0.0 I    0.0 I     3.8
                  I    0.0 I    0.0 I
                  I    0.0 I    0.0 I
                 -I--------I--------I
               3. I      1 I      0 I      46
  SOME            I    2.2 I    0.0 I    44.2
                  I   50.0 I    0.0 I
                  I    1.0 I    0.0 I
                 -I--------I--------I
               4. I      1 I      2 I      54
  VERY MUCH       I    1.9 I    3.7 I    51.9
                  I   50.0 I  100.0 I
                  I    1.0 I    1.9 I
                 -I--------I--------I
          COLUMN         2        2       104
           TOTAL       1.9      1.9     100.0

NUMBER OF MISSING OBSERVATIONS =       32
```

FILE NONAME (CREATION DATE = 05/21/82)

CROSSTABULATION OF

V8 EFFECT ON SCHOOL WORK BY V26 NO OF PARTICIPATIONS, NON-ATHLETIC +V27 NO OF PARTICIPATIONS, ATHLETIC

V8		COUNT / ROW PCT / COL PCT / TOT PCT	V26 +... 0.	1.	2.	3.	4.	5.	6.	7.	8.	10.	ROW TOTAL
BAD	2.	COUNT	4	3	1	1	1	1	0	0	0	1	12
		ROW PCT	33.3	25.0	8.3	8.3	8.3	8.3	0.0	0.0	0.0	8.3	11.5
		COL PCT	10.3	11.5	6.7	12.5	33.3	100.0	0.0	0.0	0.0	50.0	
		TOT PCT	3.8	2.9	1.0	1.0	1.0	1.0	0.0	0.0	0.0	1.0	
NONE	3.	COUNT	16	9	6	2	1	0	1	1	1	1	40
		ROW PCT	40.0	22.5	15.0	5.0	2.5	0.0	2.5	2.5	2.5	2.5	38.5
		COL PCT	41.0	34.6	40.0	25.0	33.3	0.0	33.3	100.0	50.0	50.0	
		TOT PCT	15.4	8.7	5.8	1.9	1.0	0.0	1.0	1.0	1.0	1.0	
GOOD	4.	COUNT	19	14	8	5	1	0	2	0	1	0	52
		ROW PCT	36.5	26.9	15.4	9.6	1.9	0.0	3.8	0.0	1.9	0.0	50.0
		COL PCT	48.7	53.8	53.3	62.5	33.3	0.0	66.7	0.0	50.0	0.0	
		TOT PCT	18.3	13.5	7.7	4.8	1.0	0.0	1.9	0.0	1.0	0.0	
		COLUMN TOTAL	39	26	15	8	3	1	3	1	2	2	104
			37.5	25.0	14.4	7.7	2.9	1.0	2.9	1.0	1.9	1.9	100.0

(CONTINUED)

FILE NONAME (CREATION DATE = 05/21/82)

* C R O S S T A B U L A T I O N O F *

V8 EFFECT ON SCHOOL WORK BY V26 NO OF PARTICIPATIONS, NON-ATHLETIC
+V27 NO OF PARTICIPATIONS, ATHLETIC

		V26 11.	V26 12.	ROW TOTAL
V8	COUNT			
	ROW PCT			
	COL PCT			
	TOT PCT			
2. BAD	COUNT	0	0	12
	ROW PCT	0.0	0.0	11.5
	COL PCT	0.0	0.0	
	TOT PCT	0.0	0.0	
3. NONE	COUNT	0	2	40
	ROW PCT	0.0	5.0	38.5
	COL PCT	0.0	100.0	
	TOT PCT	0.0	1.9	
4. GOOD	COUNT	2	0	52
	ROW PCT	3.8	0.0	50.0
	COL PCT	100.0	0.0	
	TOT PCT	1.9	0.0	
COLUMN TOTAL		2 1.9	2 1.9	104 100.0

NUMBER OF MISSING OBSERVATIONS = 32

FILE NONAME (CREATION DATE = 05/21/82)

* * * * * C R O S S T A B U L A T I O N O F * * * * *

V9 ATTITUDE TOWARD SCHOOL WORK BY V26 NO OF PARTICIPATIONS, NON-ATHLETIC
+V27 NO OF PARTICIPATIONS, ATHLETIC

V9	COUNT / ROW PCT / COL PCT / TOT PCT (V26 +...)	0.	1.	2.	3.	4.	5.	6.	7.	8.	10.	ROW TOTAL
NONE	2.	13	3	1	2	0	0	0	1	0	0	20
		65.0	15.0	5.0	10.0	0.0	0.0	0.0	5.0	0.0	0.0	18.9
		32.5	11.1	6.7	25.0	0.0	0.0	0.0	100.0	0.0	0.0	
		12.3	2.8	0.9	1.9	0.0	0.0	0.0	0.9	0.0	0.0	
SOME	3.	21	17	6	3	2	1	3	0	0	2	58
		36.2	29.3	10.3	5.2	3.4	1.7	5.2	0.0	0.0	3.4	54.7
		52.5	63.0	40.0	37.5	66.7	100.0	100.0	0.0	0.0	100.0	
		19.8	16.0	5.7	2.8	1.9	0.9	2.8	0.0	0.0	1.9	
VERY MUCH	4.	6	7	8	3	1	0	0	0	2	0	28
		21.4	25.0	28.6	10.7	3.6	0.0	0.0	0.0	7.1	0.0	26.4
		15.0	25.9	53.3	37.5	33.3	0.0	0.0	0.0	100.0	0.0	
		5.7	6.6	7.5	2.8	0.9	0.0	0.0	0.0	1.9	0.0	
	COLUMN TOTAL	40	27	15	8	3	1	3	1	2	2	106
		37.7	25.5	14.2	7.5	2.8	0.9	2.8	0.9	1.9	1.9	100.0

(CONTINUED)

FILE NONAME (CREATION DATE = 05/21/82)

* * * * * C R O S S T A B U L A T I O N O F * * * * *

V9 ATTITUDE TOWARD SCHOOL WORK BY V26 NO OF PARTICIPATIONS, NON-ATHLETIC
+V27 NO OF PARTICIPATIONS, ATHLETIC

V9	COUNT / ROW PCT / COL PCT / TOT PCT	V26 11.	12.	ROW TOTAL
NONE	2.	0 0.0 0.0 0.0	0 0.0 0.0 0.0	20 18.9
SOME	3.	1 1.7 50.0 0.9	2 3.4 100.0 1.9	58 54.7
VERY MUCH	4.	1 3.6 50.0 0.9	0 0.0 0.0 0.0	28 26.4
	COLUMN TOTAL	2 1.9	2 1.9	106 100.0

NUMBER OF MISSING OBSERVATIONS = 30

```
CPU TIME REQUIRED..     0.37 SECONDS

                81 CROSSTABS      TABLES=V28,V31,V32,V9,V26,V27 BY V33

***** GIVEN WORKSPACE ALLOWS FOR  3982 CELLS,  3982 TABLES WITH     2 DIMENSIONS FOR CROSSTAB PROBLEM *****
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FILE    NONAME    (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   V28       NO OF HOURS                                       BY  V33        IND-VOC MARK
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                 V33
          COUNT  I
        ROW PCT  I< 50      50-64     65-79     80 +       ROW
        COL PCT  I                                         TOTAL
        TOT PCT  I      1.I      2.I      3.I      4.I
V28     --------I--------I--------I--------I--------I
             1.  I     2  I    11  I    10  I     2  I    25
  5 OR LESS      I   8.0  I  44.0  I  40.0  I   8.0  I  39.7
                 I  33.3  I  42.3  I  45.5  I  22.2  I
                 I   3.2  I  17.5  I  15.9  I   3.2  I
                -I--------I--------I--------I--------I
             2.  I     1  I     8  I     3  I     2  I    14
  6 TO 10        I   7.1  I  57.1  I  21.4  I  14.3  I  22.2
                 I  16.7  I  30.8  I  13.6  I  22.2  I
                 I   1.6  I  12.7  I   4.8  I   3.2  I
                -I--------I--------I--------I--------I
             3.  I     3  I     7  I     9  I     5  I    24
  11 OR MORE     I  12.5  I  29.2  I  37.5  I  20.8  I  38.1
                 I  50.0  I  26.9  I  40.9  I  55.6  I
                 I   4.8  I  11.1  I  14.3  I   7.9  I
                -I--------I--------I--------I--------I
         COLUMN        6       26       22        9       63
          TOTAL      9.5     41.3     34.9     14.3    100.0

NUMBER OF MISSING OBSERVATIONS =       5
```

FILE NONAME (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
V31 ATHLETIC PARTICIPATION LEVEL BY V33 IND-VOC MARK
* PAGE 1 OF 1

V31	COUNT / ROW PCT / COL PCT / TOT PCT	V33: < 50 (1.)	50-64 (2.)	65-79 (3.)	80 + (4.)	ROW TOTAL
LOW	1.	1	10	8	3	22
		4.5	45.5	36.4	13.6	34.9
		16.7	38.5	36.4	33.3	
		1.6	15.9	12.7	4.8	
MEDIUM	2.	2	10	9	2	23
		8.7	43.5	39.1	8.7	36.5
		33.3	38.5	40.9	22.2	
		3.2	15.9	14.3	3.2	
HIGH	3.	3	6	5	4	18
		16.7	33.3	27.8	22.2	28.6
		50.0	23.1	22.7	44.4	
		4.8	9.5	7.9	6.3	
	COLUMN TOTAL	6	26	22	9	63
		9.5	41.3	34.9	14.3	100.0

NUMBER OF MISSING OBSERVATIONS = 5

FILE NONAME (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
V32 NON-ATHLETIC PARTICIPATION LEVEL BY V33 IND-VOC MARK
* PAGE 1 OF 1

V32	V33: COUNT / ROW PCT / COL PCT / TOT PCT	< 50 (1.)	50-64 (2.)	65-79 (3.)	80 + (4.)	ROW TOTAL
LOW	1.	3	17	13	6	39
		7.7	43.6	33.3	15.4	61.9
		50.0	65.4	59.1	66.7	
		4.8	27.0	20.6	9.5	
MEDIUM	2.	1	6	5	1	13
		7.7	46.2	38.5	7.7	20.6
		16.7	23.1	22.7	11.1	
		1.6	9.5	7.9	1.6	
HIGH	3.	2	3	4	2	11
		18.2	27.3	36.4	18.2	17.5
		33.3	11.5	18.2	22.2	
		3.2	4.8	6.3	3.2	
	COLUMN TOTAL	6	26	22	9	63
		9.5	41.3	34.9	14.3	100.0

NUMBER OF MISSING OBSERVATIONS = 5

FILE NONAME (CREATION DATE = 05/21/82)

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *
V9 ATTITUDE TOWARD SCHOOL WORK BY V33 IND-VOC MARK
* PAGE 1 OF 1

V9	V33 COUNT / ROW PCT / COL PCT / TOT PCT	< 50 (1.)	50-64 (2.)	65-79 (3.)	80 + (4.)	ROW TOTAL
NONE	2.	0	6	3	1	10
		0.0	60.0	30.0	10.0	18.9
		0.0	28.6	15.0	16.7	
		0.0	11.3	5.7	1.9	
SOME	3.	5	11	10	3	29
		17.2	37.9	34.5	10.3	54.7
		83.3	52.4	50.0	50.0	
		9.4	20.8	18.9	5.7	
VERY MUCH	4.	1	4	7	2	14
		7.1	28.6	50.0	14.3	26.4
		16.7	19.0	35.0	33.3	
		1.9	7.5	13.2	3.8	
	COLUMN TOTAL	6	21	20	6	53
		11.3	39.6	37.7	11.3	100.0

NUMBER OF MISSING OBSERVATIONS = 15

SPSS BATCH SYSTEM 05/21/82 PAGE 53

FILE NONAME (CREATION DATE = 05/21/82)

* C R O S S T A B U L A T I O N O F *
V26 NO OF PARTICIPATIONS, NON-ATHLETIC BY V33 IND-VOC MARK
* PAGE 1 OF 1

V26	COUNT / ROW PCT / COL PCT / TOT PCT	V33 < 50 (1.)	50-64 (2.)	65-79 (3.)	80 + (4.)	ROW TOTAL
0.	COUNT	3	15	7	6	31
	ROW PCT	9.7	48.4	22.6	19.4	49.2
	COL PCT	50.0	57.7	31.8	66.7	
	TOT PCT	4.8	23.8	11.1	9.5	
1.	COUNT	1	6	9	1	17
	ROW PCT	5.9	35.3	52.9	5.9	27.0
	COL PCT	16.7	23.1	40.9	11.1	
	TOT PCT	1.6	9.5	14.3	1.6	
2.	COUNT	0	4	5	0	9
	ROW PCT	0.0	44.4	55.6	0.0	14.3
	COL PCT	0.0	15.4	22.7	0.0	
	TOT PCT	0.0	6.3	7.9	0.0	
3.	COUNT	1	1	0	2	4
	ROW PCT	25.0	25.0	0.0	50.0	6.3
	COL PCT	16.7	3.8	0.0	22.2	
	TOT PCT	1.6	1.6	0.0	3.2	
4.	COUNT	0	0	1	0	1
	ROW PCT	0.0	0.0	100.0	0.0	1.6
	COL PCT	0.0	0.0	4.5	0.0	
	TOT PCT	0.0	0.0	1.6	0.0	
5.	COUNT	1	0	0	0	1
	ROW PCT	100.0	0.0	0.0	0.0	1.6
	COL PCT	16.7	0.0	0.0	0.0	
	TOT PCT	1.6	0.0	0.0	0.0	
COLUMN TOTAL		6	26	22	9	63
		9.5	41.3	34.9	14.3	100.0

NUMBER OF MISSING OBSERVATIONS = 5

SPSS BATCH SYSTEM 05/21/82 PAGE 54

FILE NONAME (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *
V27 NO OF PARTICIPATIONS, ATHLETIC BY V33 IND-VOC MARK
* PAGE 1 OF 2

V27	COUNT / ROW PCT / COL PCT / TOT PCT (V33)	< 50 (1.)	50-64 (2.)	65-79 (3.)	80 + (4.)	ROW TOTAL
0.	COUNT	1	7	4	2	14
	ROW PCT	7.1	50.0	28.6	14.3	22.2
	COL PCT	16.7	26.9	18.2	22.2	
	TOT PCT	1.6	11.1	6.3	3.2	
1.	COUNT	2	6	4	1	13
	ROW PCT	15.4	46.2	30.8	7.7	20.6
	COL PCT	33.3	23.1	18.2	11.1	
	TOT PCT	3.2	9.5	6.3	1.6	
2.	COUNT	0	5	4	1	10
	ROW PCT	0.0	50.0	40.0	10.0	15.9
	COL PCT	0.0	19.2	18.2	11.1	
	TOT PCT	0.0	7.9	6.3	1.6	
3.	COUNT	0	1	4	1	6
	ROW PCT	0.0	16.7	66.7	16.7	9.5
	COL PCT	0.0	3.8	18.2	11.1	
	TOT PCT	0.0	1.6	6.3	1.6	
4.	COUNT	0	2	2	0	4
	ROW PCT	0.0	50.0	50.0	0.0	6.3
	COL PCT	0.0	7.7	9.1	0.0	
	TOT PCT	0.0	3.2	3.2	0.0	
6.	COUNT	0	2	1	0	3
	ROW PCT	0.0	66.7	33.3	0.0	4.8
	COL PCT	0.0	7.7	4.5	0.0	
	TOT PCT	0.0	3.2	1.6	0.0	
7.	COUNT	0	1	1	2	4
	ROW PCT	0.0	25.0	25.0	50.0	6.3
	COL PCT	0.0	3.8	4.5	22.2	
	TOT PCT	0.0	1.6	1.6	3.2	
COLUMN TOTAL		6	26	22	9	63
		9.5	41.3	34.9	14.3	100.0

(CONTINUED)

FILE NONAME (CREATION DATE = 05/21/82)

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

V27 NO OF PARTICIPATIONS, ATHLETIC BY V33 IND-VOC MARK

* PAGE 2 OF 2

V27 \ V33 (COUNT / ROW PCT / COL PCT / TOT PCT)	< 50 (1.)	50-64 (2.)	65-79 (3.)	80 + (4.)	ROW TOTAL
8.	0	2	1	0	3
	0.0	66.7	33.3	0.0	4.8
	0.0	7.7	4.5	0.0	
	0.0	3.2	1.6	0.0	
10.	1	0	0	1	2
	50.0	0.0	0.0	50.0	3.2
	16.7	0.0	0.0	11.1	
	1.6	0.0	0.0	1.6	
11.	1	0	0	1	2
	50.0	0.0	0.0	50.0	3.2
	16.7	0.0	0.0	11.1	
	1.6	0.0	0.0	1.6	
12.	1	0	1	0	2
	50.0	0.0	50.0	0.0	3.2
	16.7	0.0	4.5	0.0	
	1.6	0.0	1.6	0.0	
COLUMN TOTAL	6	26	22	9	63
	9.5	41.3	34.9	14.3	100.0

NUMBER OF MISSING OBSERVATIONS = 5

CPU TIME REQUIRED.. 0.28 SECONDS

82 XCROSSTABS TABLES=V26+V27 BY V33

***** GIVEN WORKSPACE ALLOWS FOR 4479 CELLS AND 2 DIMENSIONS FOR CROSSTAB PROBLEM *****

FILE NONAME (CREATION DATE = 05/21/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

V26 NO OF PARTICIPATIONS, NON-ATHLETIC BY V33 IND-VOC MARK
+V27 NO OF PARTICIPATIONS, ATHLETIC

V26	COUNT / ROW PCT / COL PCT / TOT PCT	V33: < 50 (1.)	50-64 (2.)	65-79 (3.)	80 + (4.)	ROW TOTAL
0.	COUNT	4	22	11	8	45
	ROW PCT	8.9	48.9	24.4	17.8	35.7
	COL PCT	33.3	42.3	25.0	44.4	
	TOT PCT	3.2	17.5	8.7	6.3	
1.	COUNT	3	12	13	2	30
	ROW PCT	10.0	40.0	43.3	6.7	23.8
	COL PCT	25.0	23.1	29.5	11.1	
	TOT PCT	2.4	9.5	10.3	1.6	
2.	COUNT	0	9	9	1	19
	ROW PCT	0.0	47.4	47.4	5.3	15.1
	COL PCT	0.0	17.3	20.5	5.6	
	TOT PCT	0.0	7.1	7.1	0.8	
3.	COUNT	1	2	4	3	10
	ROW PCT	10.0	20.0	40.0	30.0	7.9
	COL PCT	8.3	3.8	9.1	16.7	
	TOT PCT	0.8	1.6	3.2	2.4	
4.	COUNT	0	2	3	0	5
	ROW PCT	0.0	40.0	60.0	0.0	4.0
	COL PCT	0.0	3.8	6.8	0.0	
	TOT PCT	0.0	1.6	2.4	0.0	
5.	COUNT	1	0	0	0	1
	ROW PCT	100.0	0.0	0.0	0.0	0.8
	COL PCT	8.3	0.0	0.0	0.0	
	TOT PCT	0.8	0.0	0.0	0.0	
COLUMN TOTAL		12	52	44	18	126
		9.5	41.3	34.9	14.3	100.0

(CONTINUED)

FILE NONAME (CREATION DATE = 05/21/82)

C R O S S T A B U L A T I O N O F

V26 NO OF PARTICIPATIONS, NON-ATHLETIC BY V33 IND-VOC MARK
+V27 NO OF PARTICIPATIONS, ATHLETIC

V26	V33	1.	2.	3.	4.	ROW TOTAL
6.	COUNT	0	2	1	0	3
	ROW PCT	0.0	66.7	33.3	0.0	2.4
	COL PCT	0.0	3.8	2.3	0.0	
	TOT PCT	0.0	1.6	0.8	0.0	
7.	COUNT	0	1	1	2	4
	ROW PCT	0.0	25.0	25.0	50.0	3.2
	COL PCT	0.0	1.9	2.3	11.1	
	TOT PCT	0.0	0.8	0.8	1.6	
8.	COUNT	0	2	1	0	3
	ROW PCT	0.0	66.7	33.3	0.0	2.4
	COL PCT	0.0	3.8	2.3	0.0	
	TOT PCT	0.0	1.6	0.8	0.0	
10.	COUNT	1	0	0	1	2
	ROW PCT	50.0	0.0	0.0	50.0	1.6
	COL PCT	8.3	0.0	0.0	5.6	
	TOT PCT	0.8	0.0	0.0	0.8	
11.	COUNT	1	0	0	1	2
	ROW PCT	50.0	0.0	0.0	50.0	1.6
	COL PCT	8.3	0.0	0.0	5.6	
	TOT PCT	0.8	0.0	0.0	0.8	
12.	COUNT	1	0	1	0	2
	ROW PCT	50.0	0.0	50.0	0.0	1.6
	COL PCT	8.3	0.0	2.3	0.0	
	TOT PCT	0.8	0.0	0.8	0.0	
COLUMN TOTAL		12	52	44	18	126
		9.5	41.3	34.9	14.3	100.0

NUMBER OF MISSING OBSERVATIONS = 10

83 READ INPUT DATA

CPU TIME REQUIRED.. 0.15 SECONDS

84 FINISH

NORMAL END OF JOB.
84 CONTROL CARDS WERE PROCESSED.
0 ERRORS WERE DETECTED.